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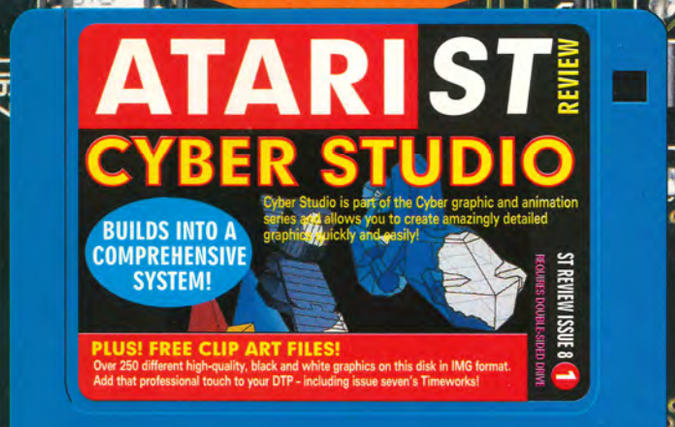

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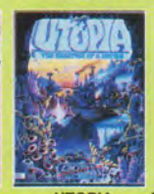
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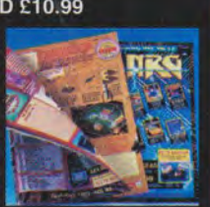

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CONTENTS

We've all heard plenty about the Falcon, but what does it actually look like inside? We spent a day going over the machine with a fine tooth comb. What did we find? Turn to page 30 to find out.

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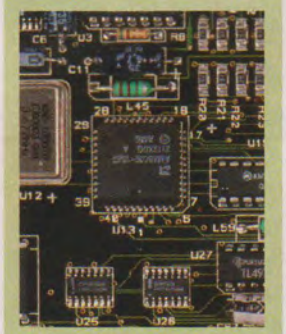
DECEMBER 1992



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The third and final Lotus game from Gremlin has arrived. We take it for a test drive on page 78. Meanwhile, if you prefer more leisurely pastimes, you're likely to be bowled over by Graham Gooch's Test Cricket. Check out our preview on page 73.

ON THIS MONTH'S COVERDISKS

CYBER STUDIO

Enter the world of Computer Aided Design with the first part of this great package. Two versions are supplied for half and one Meg machines.

EVADER

A complete game by Dave Munsie from the USA. Vertical scrolling shoot 'em-up action.

ALSO APPEARING ON THIS MONTH'S DISK

Plenty to keep you amused and occupied including...

TIMEWORKS ART – Clip art for your DTP documents.

ALARM – Remind yourself when Eldorado is on!

AUTOBAK – Kill off unwanted files easily.

DIAMOND FORMAT – An excellent formatting utility.

HEAVENLY MUSIC – A MIDI file for your sequencer.

MAGNIFY – Increased magnification of the screen for fine detail with desktop publishing or art packages.

SLUG 2092 - Rescue the babies in this exclusive full game.

WHICH ST? - Identify your setup quicky, easily and accurately.

AND SPECIALLY FOR YOUR ST

A selection of print utilities and bug fixes.

FEATURES

30 UNDER THE MAGNIFYING GLASS
We take a close look at Atari's new dream machine, the Falcon 030.

36 GET ORGANISED
Looking for something for the person who has everything? You could do far worse than a personal organiser. In the first of a two-part round-up, we look at seven of the best with prices to suit every pocket.

42 COPY CATS
The ST may be a wonderful machine, but there are times when we'd all appreciate the facilities of a PC or a Macintosh without trading in our current machine. Emulators offer the perfect solution – but which is the best of the bunch? We compare a range of these little gems and give you our opinion.

48 CHANGE OF KEY
And if emulators aren't enough, take a look at the DEKA keyboard interface which allows you to use one of the many excellent PC keyboards currently available.

52 CHRISTMAS BELLES
We're in seasonal mood with a round-up of the best buys for Christmas. If you're having trouble with your Christmas shopping list, our tips should point you in the right direction.

55 LOOKING TO THE FUTURE
The Insite Floptical Disk Drive is the latest alternative to the good old floppy. But how does it stand up to tried and tested methods of data storage? We find out. . .

57 ON-LINE LETTERS
Conventional fax machines are all very well, but wouldn't you like one that you can run straight from your favourite word processor or DTP package? Enter the TKR Fax Modem.

WIN AN ORGANISER!!!
WE'VE GOT A PSION SERIES 3 ORGANISER UP FOR GRABS ON PAGE 51!

WIN A MEMORY UPGRADE
TURN TO PAGE 112

REGULARS

6 NEWS
There are big moves on the horizon concerning Atari Germany and the Atari Corporation is planning to change its marketing strategy within Europe. We bring you the latest on this, together with the lowdown on new software and hardware releases, upgrades and a round-up of what's happening in the world of Atari.

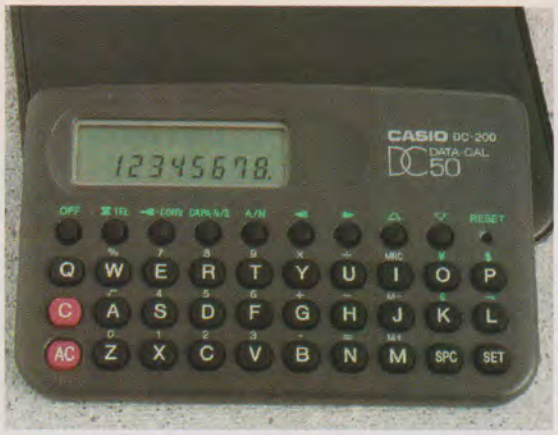
17 COVERDISKS
The art package CAD3D gives real power to your fingertips this month while Cybermate will animate its drawings. On top of that, there are two full games and a host of utilities to tune up your ST and help you get the best from it.

61 MIDI MONTHLY
In this month's look at the world of music making on the ST, we focus on two new packages from Roland and a cheap solution to the problem of cartridge port congestion.

71 SCREEN SCENE
The world of ST games is still thriving – and we can prove it! Just to convince you, we've taken a look at Gremlin's latest motor racing extravaganza, yet another football license from Zeppelin, Loriciel's latest puzzle game and a host of bargain buys all feature in this month's Screen Scene – and if that isn't enough for you, we check out the best of the forthcoming releases in First Impressions.

88 PD ZONE
We're back in glorious colour this month for our look at the weird and wonderful world of public domain. As usual, there's something for everyone – on top of the best in games and utilities we bring you a selection of excellent clip art packages, most of which are compatible with Timeworks.

PUNTER POWER!
CHECK OUT OUR READER OFFERS ON PAGE 58



Get organised! Part one of our round-up begins on page 36.

SCREENSCENE

Play to win with our look at the best of the current and forthcoming software releases

GRAHAM GOOCH'S TEST CRICKET 73
SENSIBLE SOCCER 92-93 SEASON 74
LEGENDS OF VALOUR 74
LOTUS III 78
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ST BUYER

Everything for the enthusiast. . .

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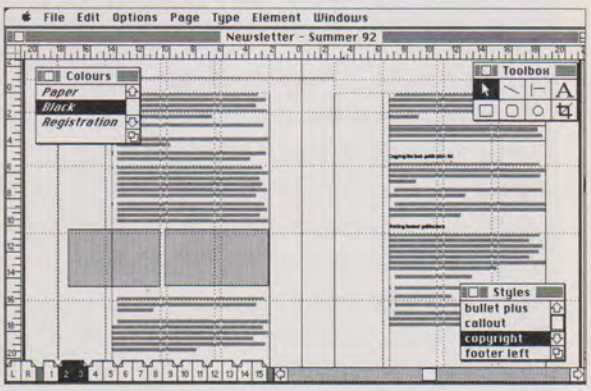


Teach your ST new tricks with an emulator.

NEWS OILING

Hello and welcome to this month's ST Review. If this is the first time that you've bought an ST magazine, then no doubt you already know what you're getting for Christmas and are looking for the ideal magazine to partner your ST.

On the disk this month we have the first part of a three-part art, graphics and animation program and the most comprehensive package ever available on ANY magazine's cover disks. Inside we've got everything that you need to get the very best out of your ST, with a huge tutorial that shows you in easy steps how to use Cyber Studio's amazing 3D design and animation package. There are also tutorials that cover desktop publishing, programming and we even tell you how to set up your own PD library. There's so much that there just isn't enough room to tell you. Just turn the page and enter the world of the ST...

This is how most editorial blurbs will sound about now as all types of consumer driven magazines try to pick up new readers over Christmas and I'd be lying if I were to say that we won't be looking for new readers too.

But what you, the reader should do is constantly look around. In the ST market, there is not a lot of choice – just ST Format, ST User and ourselves but each month you should make a choice of which magazine offers you what you want. Pick the mags up and flick through and carefully look at the balance and content of the magazine. Make your decisions based on the value you get for your money. But don't make that decision once – make it every time you buy an ST magazine.

GARTH SUMPTER

The Atari Corporation has embarked upon a huge restructuring of its whole European network of main and subsidiary offices, with the first major casualty being the Managing Director of the German HQ, Alwin Stumpf.

The departure of Stumpf was greeted with mixed emotions by several members of the Atari world. Stumpf, who is generally considered to have been responsible for the growth of the German market, parted with Atari due to disagreements over the change in marketing direction.

The shock move comes at a time when the company is looking to change its whole marketing strategy for Europe, to "bring it in line with the opportunities presented by the relaxing of trade restrictions in a single market".

There are no doubts that this move will also mean the loss of several of the local offices with some job losses an inevitable consequence. Currently, there are no plans to close the three main Atari offices in England, France and Germany, but a spokesman for Atari UK says that some countries' local offices will be reviewed. Countries affected will be Switzerland, Italy and several of the low countries including Sweden and Norways.

RESTRUCTURING

Atari states that this change of approach has come about due to its need to 'harmonise product direction'. Bob Gleadow, the enigmatic MD of Atari UK, stated that "with the rise of the Lynx and imminent release of the 32-bit Jaguar, Atari must now get back into the games business, and as such has a requirement for a pan-European games marketing policy". Whilst this seems obvious, the person to head up such an operation may not be – although many outsiders would seem to look to Bob to plug up such an important marketing gap.

"The challenge for new products is to make them user-friendly for the first-time user" – Bob Gleadow, Atari UK

THE MACHINE

NEW MARKETS

With central planning for Atari games software, the company should be able to market them as multi-cultural products across the whole of Europe without the need to translate or produce separate advertising and promotional strategies.

LOOKING TO THE FUTURE

Whilst changes in the way that Atari markets games software are fairly clear, the direction of its hardware platform seems far less certain. Much, of course, will depend upon how well Falcon takes off.

This will certainly be affected by Atari's plans to reduce the burden of their wholly-owned subsidiaries and allowing the emphasis for stocking their products fall back onto the distributors.

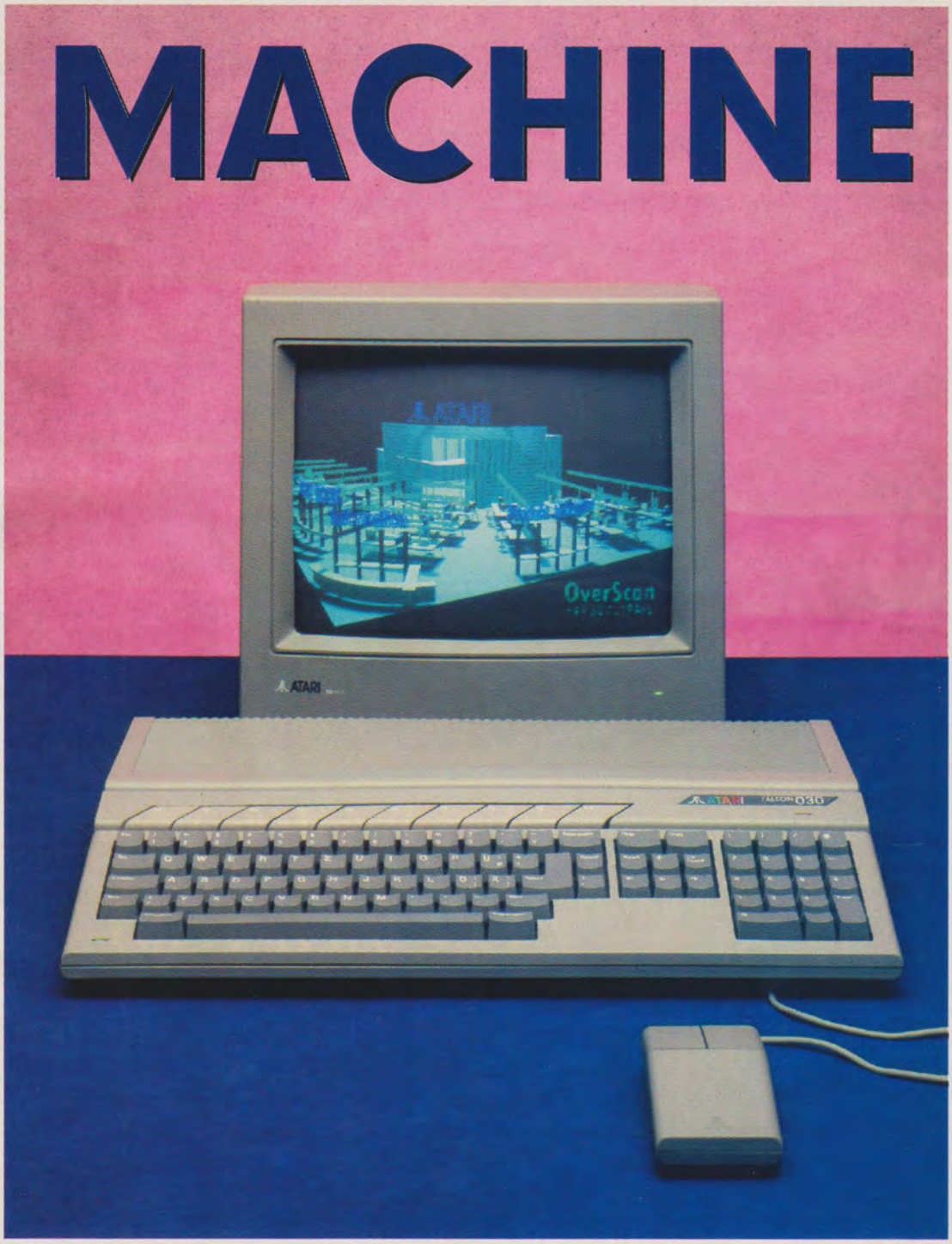
IN THE RED CORNER

There really is only one competitor for the crown of multi-media machine as the recent announcement of the price and specification of the Amiga 1200 machine gives it enhanced graphic capabilities. The omission of a Digital Signal Processor, which is at the heart of the Falcon, means that Commodore cannot compete with the Falcon on a technological basis and seems to have left the way clear for Atari to step in and make its own market – and rules.

AMASSING A MARKET

Atari's Bob Gleadow sees the Falcon as being a truly mass market product by late '93 – a bold statement in line with their new, brash approach which they intend to adopt to bring Atari out of their marketing doldrums of the late 80's and early 90's when they admit that they made some poor decisions, and place themselves firmly in the 1993 market place.

What remains clear is that Atari seems to be ready to drag the company, kicking and screaming if needed, out of the slow, cumbersome and outdated architecture of the booming 80s, and place it firmly at the forefront of the lean, mean 90s.



The familiar shape of things to come? If the Falcon remains in its ST packaging then Atari will have the added dificulty of marketing a wolf in sheep's clothing.

ATARI'S PLAN for the 90's

• TECHNOLOGICAL SUPERIORITY AND INNOVATION

Atari wants to hone the way in which it is perceived and will be working on extending its reputation for constant technological improvement and superiority.

• INTERNATIONAL PRODUCTS

The projected changes in the European marketing strategy will begin to take effect early next year and will target Atari's machines, The ST, Falcon030, TT and Lynx, as truly international products that come under one single marketing strategy.

• A SINGLE EUROPEAN MARKET

The one product that will easily cross this market is games software. It has very few language problems – especially the Lynx which, in its latest guise, is now beginning to penetrate its market.

NEWS

IT'S ALL HAPPENING AT GAMESMASTER LIVE!

4TH-6TH DECEMBER 1992

NEC BIRMINGHAM

Taking up three halls of the National Exhibition Centre in Birmingham, Gamesmaster Live! will be the biggest event in computer gaming history. All of your favourite software houses will be represented, including Ocean, Gremlin, US Gold and Virgin.

To give you a taste of what to expect, there will be motorcycle simulators, a Quasar Laser Game, Virtual Reality, Flight and Car simulators, a Mega Arcade and a complete ***Gamesmaster*** set. Dominik Diamond, presenter of the Channel 4 series, will be presenting four challenges each day and the Gamesmaster himself will be beamed live to the show via satellite.

There will be displays, video walls, racing cars, James Bond's Aston Martin and much more to see and do. The good news is, once you've paid your admission, all of the features are free! So you can have fun without spending a fortune. There is even a retail area so you can buy a new computer or game too.

SPECTRUM HOLOBYTE IN COLOURFUL VR DEAL

Top American software house, Spectrum Holobyte, has announced that it has received $4 million worth of equity funding to enable it to continue developing top quality software.

Jean-Luc Pickard, Data and Spock in an episode of Star Trek: The Next Generation.

The company, which counts ***F-16 Falcon*** and ***Tetris*** amongst its successes, has a long-term agreement with Edison Brothers of St. Louis to develop software for virtual reality software for home use. This will enable users to plug into a complete alternative world in their living rooms.

The company has recently entered into an agreement with film makers Paramount Pictures for the exclusive rights to produce computer and video games using the names and characters from ***Star Trek: The Next Generation***.

PAINTPOT REFILL

Switchsoft, the producer of ***Paintpot***, which we gave you on the October coverdisk, is offering a user manual for the package.

Send a cheque or P.O., payable to Switchsoft, for £3.99 including post and packing to: Switchsoft, 26 Ridgeway, Darlington, County Durham, DL3 0SF. You can order with your Visa card. Phone 0325 463479 with your card details.

Creating a picture like this is even easier when you have the Paintpot manual.

L.A.P.D. IN COPYRIGHT BATTLE

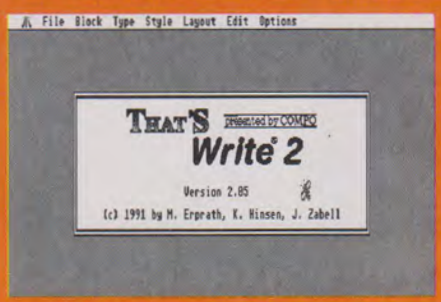
The public domain is once again under fire for alleged copyright infringement. L.A.P.D has recently been informed by Waddington's that it has been made aware of several infringements of its licence. The games concerned are ***Risky*** and ***Napoleon***. The programs are versions of the games ***Risk*** and ***Campaign***.

On a more positive note, the company has also announced that it is able to reduce its prices now that it has become registered for VAT.

It is happy to pass these savings on to its customers. All disks (except specials) have been reduced to £1.50.

L.A.P.D. are at 80 Lee Lane, Langley, Heanor, Derbyshire, DE7 7HN and they can be contacted on 0773 605010.

COMPO FLIES WITH FALCON



Compo Germany is currently revamping its entire range to provide support for the Falcon.

The latest version of That's Write 2 is already Falcon compatible and later versions will have enhanced features to take advantage of the new machine's capabilities. We are promised 3D graphics and support for all of the Falcon's colour modes.

Managing Director of Compo UK, Neal O'Nions refused to deny rumours of new hardware emulators for the Falcon, except to say that the future is looking good.

The Falcon can add That's Write 2, to its list of compatible programs, showing that the machine will be well supported.

MIND YOUR LANGUAGE

Learning German the easy way with LCL.

Two new GCSE courses are now available on the ST from LCL.

Micro English and ***Micro German*** are designed to be easy to use and fun to learn. The English lessons start at age eight and work right up to GCSE standard, covering everything from simple spelling and punctuation to understanding and appreciating literature. Some of the programs are based on games to keep you interested, and spelling is taught by pictures and 'speak and spell' type programs.

Micro German covers both business and pleasure as well as GCSE-level learning. It covers spoken and written German and will even generate business letters automatically.

Both packages come boxed with a book and a manual and sell for £24 plus 99p postage and packing and are available from all good stockists. If you have any problems, you can order direct from LCL, Thames House, 73 Blandy Road, Henley-on-Thames, Oxon, RG9 1QB, or ring 0491 579345.

In the beginning
there was Void

RACING MAD!

A new way to play those racing and flying games has been produced by Spectravideo. Endorsed by Nigel Mansell, the Logic 3 Freewheel is mercury switched and is very responsive. On sale in the shops in time for Christmas, it sells for £29.99.

For further information contact Spectravideo on 081 902 2211.

The Freewheel from Spectravideo – ideal for racing and flying games. The one and only Nigel Mansell is endorsing the Freewheel.

DIZZY'S BACK!

That irrepressible hero, Dizzy returns in a new adventure, *Crystal Kingdom Dizzy.*

The new game, from Codemasters, sees Dizzy attempting to save his home land from an imminent curse. The crystal treasures of the Prophet Zeffar have been removed from their sacred place, and the Crystal Kingdom is disintegrating. Dizzy must retrieve Zeffar's crystal chalice, crown and sword to save the kingdom. Action takes place in four different areas which can be accessed separately, thanks to a password entry system.

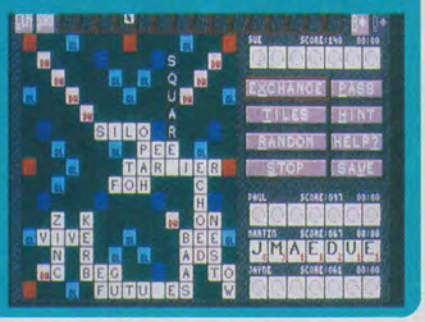
***Crystal Kingdom Dizzy* should be in the shops now, priced £19.99.**

Crystal Kingdom Dizzy. Save the kingdom by searching for the treasures.

There are four different settings to explore in Dizzy's world.

IMPROVE YOUR WORDPOWER

US Gold is due to release *Scrabble* next month in a tie-in with Spears Games. The game is faster and more user friendly than previous *Scrabble* games and comes complete with the Chambers Official Scrabble dictionary of over 126,000 words, so bluffs can be called instantly. You can have up to four players or play against the computer and have a choice of nine difficulty levels. The colours are the same as the board game and you can even get a printout of the final board at the end of a game. *Scrabble* will be in the shops by Christmas, priced £27.99.



A new way to play an old favourite.

BAY COMPUTERS

In our trivia feature in the November issue of ST Review, we incorrectly stated that the registration fee for *Pools – Expert Results Predictor* was £10 instead of £15.

We would like to apologise to Bay Computers and any owners of the program who were misled by this.

POWER TO THE PEOPLE

A new bulletin board was due to go on line on the 2nd November. The board, which is called The Power House BBS, is run by Power Computing and will be aimed at ST, Amiga and PC owners.

Running on an Amiga 200 with 23 Megabytes of memory, a 68040 processor and a 1.4 Gigabyte hard disk drive linked to the latest in Miracom modems, the system will be available to any modem running at 300 to 16.8k baud rate.

The board is available free to all users and discounts of five to 15 per cent off selected Power Computing products will be on offer. There will also be a voluntary registration system which will offer even greater discounts, but this will not restrict free users in any way.

As well as the latest PD and Shareware programs available for free download, the board will also offer free itemised billing of the time spent on the system, on-line ordering and same day dispatch, free technical information, on-line games and fast downloading of upgrades to software in a secure area for products that have been purchased.

The Power House is on 0234 841503.

ALL CHANGE!

Two new services have been launched to help you to buy and sell computer equipment and swap games.

The National Secondhand Computer Exchange Service will list all of your unwanted hardware and software and charge just £5 per system. Buyers can obtain a list for 50p. NSCES will handle all of the transactions and forward the money and goods to the buyer and seller.

For further information, send an SAE to NSCES, 8 Apsley Road, Great Yarmouth, Norfolk, NR30 2HG.

The Software Exchange offer a swap service for original games with full documentation. You can swap your games for a fee of £2.75 each and an enrolment fee of £16. Contact them at PO Box 19, Newbury, Berkshire, RG13 1XU. Phone 0635 33680.

LADBROKES UP THE ODDS

New models and price reductions are on offer at Ladbroke Computing International.

Two new hard disk drives, one of 40 and 80 Megabytes have been added to the Data-Pulse Plus range at £289.99 and £379.99 respectively, while the 52 Megabyte drive has been reduced to £319.99. All hard drives are based on Quantum mechanics and now have SCSI expansion ports to allow the addition of further SCSI devices.

Also available from Ladbrokes is a new Data-Pulse Plus 21 Megabyte Floptical drive, which can be purchased as a stand-alone unit or as an upgrade to an existing Data-Pulse drive.

Ladbroke Computing International are at 33, Ormskirk Road, Preston, Lancs PR1 2QP, telephone 0772 203166.

The Data-Pulse Plus from Ladbrokes. Two new sizes and price reductions

then there was

Write a program for our coverdisks and you could earn up to £500 – with a minimum payment of £50 for even the smallest of your best utilities...

PD AUTHORS SOUGHT

If you've written any neat programs, fun games, incredible utilities, or anything that you think other people might want to see, why not turn your hard work into hard cash?

Unlike mags that offer to pay you £1000, we won't promise you the earth, but if we use your programs you may get paid a small fee, and if your work is exceptional you could earn up to £500.

You may not rate your small routine that works out every prime number between one and five, but it could be just what somebody else needs. We're also interested in seeing any outstanding PD that hasn't been around for years.

Please put your programs etc, onto a standard ST disk. Full documentation should also be included on the disk.

Send your completed form to: ST Review Coverdisk Submissions, 26 Brunswick Park Gardens, London N11 1EJ.

- **ALL READ-ME FILES MUST BE IN ASCII.**
- **PLEASE ENCLOSE A STAMPED ADDRESSED ENVELOPE.**

ST REVIEW PROGRAM SUBMISSION FORM

NAME.....

ADRESS.....

.....

.....

.....

PHONE.....

PROGRAM SIZE IN K.....

VERSION OF TOS YOU ARE RUNNING.....

PROGRAM NAME.....

ADDITIONAL FILES REQUIRED BY MAIN PROGRAM

.....

.....

BRIEF SUMMARY OF WHAT MAIN PROGRAM DOES

.....

.....

.....

.....

.....

TYPE OF PROGRAM:

GRAPHICS/MUSIC PACKAGE ❒

GAME ❒

DEMO ❒

PROGRAMMER'S TOOL ❒

PROGRAMMER'S ROUTINE ❒

FUN ❒

OTHER (PLEASE SPECIFY).....

PLEASE ENSURE THAT YOUR DISKS ARE VIRUS FREE AND THAT YOUR NAME, ADDRESS, AND PROGRAM NAME ARE WRITTEN ON THE DISK.

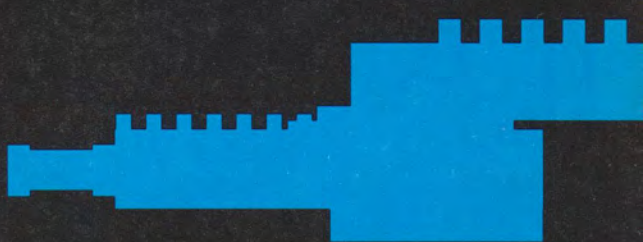
IMPORTANT

You MUST sign this declaration before your programs will be considered: "The above named program(s) are submitted for exclusive publication in ATARI ST REVIEW magazine. It/they are wholly my own work and I agree to indemnify EMAP Images against any possible legal action should copyright problems arise.

SIGNED.....

DATE.....

and now....



THINK OF IT AS A WAY OF LIFE

JOURNALISTS see new titles every week, each one claiming to be the best of it's kind, to date. Yet at the recent European Computer Trade Show it was the journalists themselves that could be found singing the praises of one new title in particular - LEGENDS OF VALOUR.

KEVIN BULMER (The Designer of Corporation) and IAN DOWNEND the creators of LEGENDS OF VALOUR, were literally jostled off their feet as writers, retailers and fellow programmers sought to experience what one prominent industry figure called "A game that's more a way of life - utterly extraordinary."

Demo disks can only scratch the surface, screenshots in magazines could never do the astounding graphics justice (that's why you'll see none here). The only way to really find out what all the fuss is about is to experience it for yourself. LEGENDS OF VALOUR - The Dawning will be available on Amiga, ST and PC very soon.

Ask your retailer for more details or send a S.A.E. to Danielle Woodyatt at the address below for an information pack.

synthetic dimensions

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FAX: 0234 240687

ST GAMES

TITLE	PRICE	TITLE	PRICE
A10 Tank Killer	£21.49	Jimmy Whites Snooker	£16.99
Addams Family	£15.99	John Barnes Euro Football	£15.99
Air Bucks	£16.99	Kick Off 2	£11.99
Air Warrior	£21.99	K.O.2 Giants of Europe	£8.49
Another World	£16.99	K.O.2 Return to Europe	£8.49
Apidya	£15.99	K.O.2 Winning Tactics	£8.49
Archer Maclean's Pool	£16.99	Knightmare	£17.99
Arsenal FC	£16.49	Knights of The Sky	£21.99
Back To The Future III	£9.99	Lemmings	£15.99
Barbarian II	£15.99	Lemmings Data Disk	£12.99
Bat II *	£22.99	Liverpool	£15.99
Battle Toads	£16.99	Lotus Turbo Challenge II	£14.99
Beast Master	£16.99	Lotus 3-Ultimate Chall	£15.99
Bills Tomato Game	£17.99	Man Utd Europe	£15.99
Blues Brothers	£15.99	Megafortress	£16.99
Californina Games II	£15.99	Megatraveller II	£19.99
Campaign	£TBA	Mega Sports	£15.99
Carl Lewis Challenge	£15.99	Microprose Golf	£21.99
Castles	£18.99	Midwinter II	£20.99
Ceasar *	£18.99	Monkey Island	£15.99
Celtic Legends	£16.99	Myth	£15.99
Centurion	£15.99	N.MansellsWorld Champ.	£TBA
Championship Manager	£15.99	Ork	£15.99
Chuck Rock	£10.99	Pacific Islands	£18.99
Cohort II	£18.99	Parsasol Stars	£15.99
Cool Croc Twins	£15.99	Plan 9 From Outer Space	£21.99
Cool Worlds	£16.99	Pools of Darkness	£18.99
Covert Acion	£21.99	Populous II	£16.99
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Doodle Bug	£15.99	Realms	£14.99
Dungeon Master/Chaos	£15.99	Red Baron	£20.99
Elvira II	£20.99	Robocod	£15.99
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F19 Stealthfighter	£18.49	Shadowlands	£18.99
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Floor 13	£19.99	Striker	£15.99
Formula OneGrandPrix	£21.99	Super Space Invaders	£13.99
Games Espana '92	£16.99	Super Tetris	£19.99
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COVER DISKS

WORKING WITH YOUR COVER DISKS

LOADING CYBER STUDIO PAGE 25

There's plenty to keep you busy this month with two versions of CAD3D, two brilliant exclusive games and a host of utilities

This month, our coverdisks are dominated by the first of our great ***Cyber*** series giveaway, but we've managed to cram in much more to keep you going at least until next month. Most of the ***Cyber Studio*** programs are on disk one, although there is an alternative version of ***CAD3D*** on disk two for those of you who haven't yet upgraded to one Megabyte of RAM in your machine (see page 58 for the cheapest upgrade available anywhere). Also on disk one are more than 200 pictures for you to use with ***Timeworks***. More details can be found in the tutorial starting on page 106.

COMPRESSED FILES

We are using a new method of compression on our files to make sure we can give you as much as possible on our cover disks. As with ***Timeworks*** last month, the program files are compressed using a special program that reduces the size of the file without altering it in any significant way. If you were to compare an original copy of any of the programs on the disk you would notice the difference in size.

WHAT TO DO IF YOU HAVE PROBLEMS WITH YOUR COVER DISKS

DON'T PANIC!

In the unlikely event that your cover disk won't load or gives any other problems at all, remove all cartridges and peripherals and try again. Please note that to restart the computer, you must SWITCH IT OFF for at least five to 10 seconds to clear all traces of resident programs before continuing.

If this doesn't solve your problem, return your disk, with a brief note of the problem and a stamped addressed envelope to P.C. Wise Ltd., Dowlais Top Business Park, Dowlais, Merthyr Tydfil, Mid Glamorgan, CF48 2YY. They will test the disk and send a replacement as soon as possible. You can contact the P.C. Wise Helpline with any urgent problems. Please note that they will deal with faulty disks only and not general enquiries. They can be contacted by telephone on 0685 350505 between 10.30 and 12.30 on weekdays.

STEP BY STEP

BACKING UP YOUR DISKS

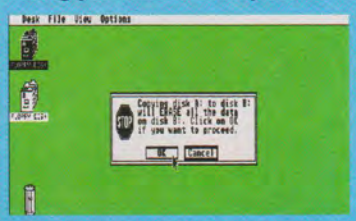
This guide is based on a single disk system. If you have two floppy disks, place a blank formatted disk in floppy disk B and proceed as shown. For a single disk system, follow the instructions. You will be told when to swap the disks. In both cases, make sure you have a blank formatted disk ready before you begin

1 ***Format a double sided disk by placing a new disk in the floppy disk drive. Click on floppy drive A and go to the File option at the top of the screen. Click on Format and then click on OK for both of the next two dialogue boxes. Write protect the cover disk (but not the blank disk) so that the disk cannot be written to by the ST, moving the small black notch on the back of the disk so that you can see through it. This will save mistakes later on. Place the cover disk in the drive.***

2 ***Click on Floppy Disk A to highlight it and hold the left mouse button down.***

3 ***Use the mouse to drag the floppy disk icon towards Floppy Disk B until that is also highlighted. The computer will treat the floppy disk drive symbol as being A for the source drive (the cover disk you are copying) and B for the destination floppy disk drive (the blank disk you are copying to). Don't worry, the ST's not going to expect you to have another disk drive connected.***

4 ***Release the mouse button. You should then be presented with a dialogue box telling you that the computer is copying disk A to disk B. It will also tell you that all of the info on floppy disk B will be erased. As you have just formatted disk B there is nothing to erase.***



5 ***Click on OK and another dialogue box will appear with the word Copy highlighted. Click on OK again. The computer will read as much as it can from disk A and hold it in memory before it asks you to insert disk B. Swap the cover disk for your blank formatted disk and then click on OK. You must remember that disk A is always the cover disk and disk B is your blank formatted disk.***

6 ***Swap the disks as requested and you will end up with a copy of the disk on your blank formatted disk.***

Make sure that you put the original disk somewhere safe and work with the copy.

In the unlikely event of anything subsequently going wrong with your coverdisks, you'll have the original to refer to whenever you need it.

NEW DIME

This month sees the first part of our exclusive Cyber series on the coverdisk. Paul Keller shows you how to get the most from the first package

We've all tried or at least seen some of the other 3D modelling packages available. The trouble with most of them is that they're too limiting in their scope or too time-consuming in their calculations. ***Cyber Studio*** and the rest of the Cyber range are neither, and constitute one of the most versatile packages available for the ST.

With its friendly icon and window system, ***Cyber Studio*** is much more than just a toy. In fact, what you have at your disposal is a powerful pre-design package. You can make scaled measurements of your objects or design sets to the greatest accuracy, and pre-defined 3D object tools help make the work of 3D creation more fun.

Use it to help in the building of 3D design sets or complex light shaded objects, cartoons, space ships, castles and maps. Put your house or office to scale and then place your contents such as chairs, tables, office cabinets etc., inside them for repositioning, and design the ultimate home or office layout.

The package has already been used by TV and video companies in pre-production design and also by artists, designers, modellers and teachers. Its versatility makes it immediately usable by anyone who might be interested in using such a modelling package, for business or pleasure. And it's yours FREE on this month's cover disk!

Having backed up your coverdisks, you should print out all TXT and READ ME files. On disk one you will find 'ANIMATOR', 'HARDCOPY', 'CAD3D2.PRG' and 'CYBERMATE.PRG'. On disk 2 you will find 'CAD3D.PRG' and 'ANIMATE'.

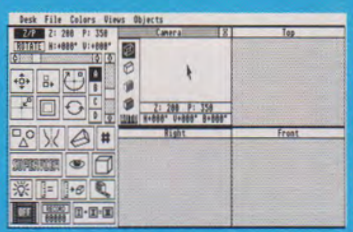
If you follow the examples on these pages you will very quickly be making complex designs and shapes in just a few minutes.

UNDERSTANDING THE ICONS

Throughout the tutorial on these pages, we have referred to the icons by number. On page 23 there is a full icon guide, including an easy-reference key.

STEP BY STEP

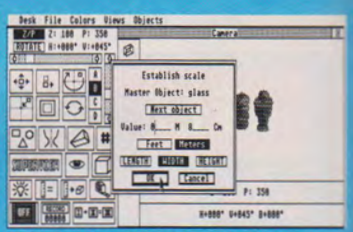
CAD 3D allows you to create 3D objects quickly and easily



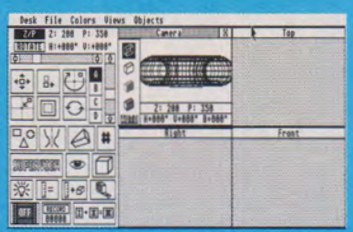
1 *Left of the workscreen are the tools, on the right are the work display areas.*

4 *Select the camera window, then the third shaded box to shade the object. Click on icon 15.*

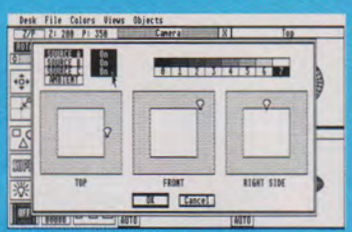
7 *In 'colours' select 'customised', then 'set colours'. Change them with the RGB sliders. Select icon 16.*



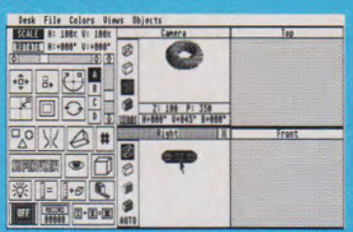
10 *With icon 19, select metres or inches. Choose a master object and type in a measurement.*



2 *Use Icon 11 to choose a shape. Click on Torus, type a name and select the top red or blue bar.*

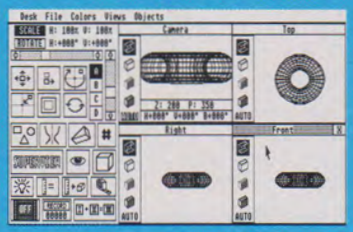


5 *Select icon 18 and turn on source B and C. The bulb symbols indicate the position.*



8 *Select icon 1, move bar 3 so (Z) = 100, click in camera window, then 'right' window. Select object, move up.*

11 *Select a cube from icon 11, call it 'tabletop', select icon 20, type sizes for small tabletop, 'resize it'.*



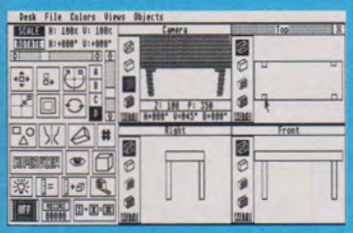
3 *The shape is drawn in the 'Camera' window in wire frame mode (selected – inverted box).*

6 *Choose icon 9, 70%. With icon 2, move bar up until V = +045, click in camera window, then Superview.*

9 *Icon 7, 12. Click on 'Edit', 'clear', remove tick on 'connect', draw symmetrical object, right. 'Options', 'do spin'.*

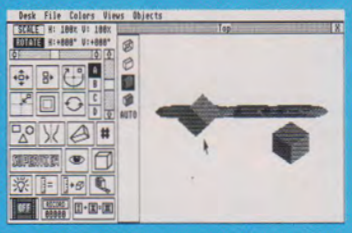
12 *On a new screen, select a cube, call it 'leg 1' and call up icon 20. Type in a size and create another three.*

NSIONS

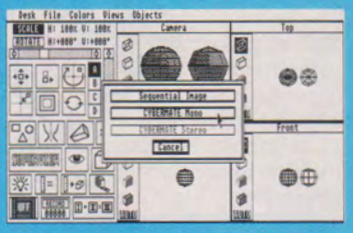


13 *Click on 'objects', 'select', click on 'table top', 'OK!' Move legs and table in 'Top' and 'Front', join.*

15 *Centre the table with icon 8 and save your work with 'save all' under the file menu.*

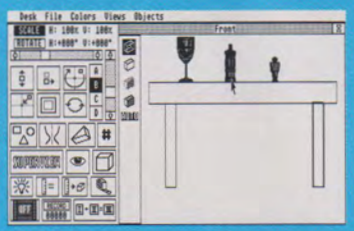


19 *These were used in pic 18 – one pierced by a tree, while the other is in front of a tree. Use all windows for best results.*

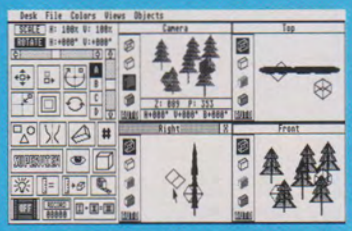


24 *Select icon 22, 'film neg', and from the dialogue box select 'Cybermate Monoscopic'.*

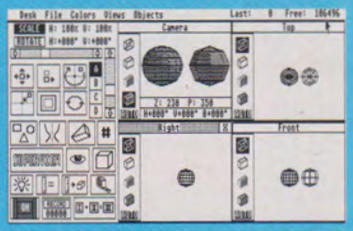
14 *Click on icon 24, select 'tabletop' + 'leg 1' = 'table 1', then OK, link 'table' + 'leg 2' = 'table 2' etc.*



16 *When moving items around in the windows use 'wire frame' mode.*



20 *The trees in the 'top' and 'right' windows are bunched up. Move them 'to improve display.*



25 *Load in 3D2 data. If you haven't saved your spheres as 'save all', cancel and retry.*

17 *Here a floor was made by selecting 'cube' and rescaling it as a rectangle. This selected on its own can be changed (from windows) by icon 1, now saying scale. By rotating and copying this you can make a wall too!*

21 *In the objects menu click on 'select' to see the objects you've made.*

26 *From the 'objects' menu select 'delete', sphere 2 and o.k. Click record.*

22 *After resizing some objects, we used icon 5 to move treetops and trunks together.*

27 *'Rotate' and frame advance increase by 18°. Click camera, record, stop recording with icon 22.*

18 *To copy complex objects quickly, select a window other than camera, and while holding down the shift key select the object to be copied and move it. When presented with a dialogue box create a new name for your copy.*

23 *In 'Colours', select '7 shades', 'set colours', two sets of shades. Use icon 11 to create sphere 1 and 2.*

28 *Quit program, select animator folder, then 'animate2.prg', select your 'DLT' file and 'o.k'.*

POETRY

Along with CAD3D 2.0 on the cover disk is Cybermate. Paul Keller shows you how to use it

Cybermate is an animation control language specifically designed for use with CAD3D 2.0. The interpreter which ***Cybermate*** contains can be used to combine standard Forth commands with specialised display control statements, to build up smooth, fast animation sequences.

Cybermate is an object-oriented animation package: this means that you can have lots of separate animations stored under one name which can be called up and linked together with other such animations. This gives you a greater flexibility and allows you to cut and paste between animations. Special effects such as sound and dissolve can also be added to your creations.

MANUAL

A comprehensive 72-page ***Cybermate*** manual can be found on disk one in the file 'CYBERMATE.TXT', and if you really want to get to grips with ***Cybermate*** in more depth, you should print this out for reference and for future use.

DLT FILES

Cybermate works with DLT files, which have to created from within CAD3D 2.0 with the record function.

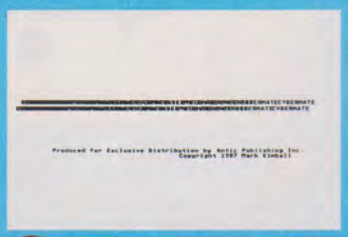
Prepare a 'data disk' and copy all the items from the EXAMPLES folder and 'PREVIEW.EDT' onto this. We will be using this disk as our workdisk. Make sure that the files are not in any folders for this exercise.

SPHERES

We also need to copy across our 'spheres' animation example that we created with the 'record' function from CAD3D 2.0, including its DLT, 3D2, and PI1 files.

Rename those files to SPHERES.DLT, SPHERES.3D2, SPHERES.PI1, or alternatively, whenever SPHERES is mentioned, place the name that you have previously saved before in its place.

STEP BY STEP



1 ***Load in Cybermate, then place your data disk in drive A. You are presented with the screen above and are ready to start the fun.***

```
SEQUENCE CUBELOGO       (return)
SEQUENCE SPHERES        (return)
SOUND CUBEBONK          (return)
SOUND SNDTRACK          (return)
At prompt type:
OPEN A:\SAMPLE.CYB      (return)

1 LOAD                  (return)
LOGO                    (return)
```

2 ***Pressing any key, you enter the interpreter mode of Cybermate. Type in the above; the delete key acts as backspace and you should make all spaces two characters wide.***

3 ***The above picture whizzes around and into the screen! Pressing return will send you back to Cybermate. Next type in 1 LIST.***

```
ok
ok
ok
ok
ok
1 LIST
Scr # 1
  0 \ Simple Sequence Procedure
  1 : LOGO
  2       30 cubelogo rate        \ updats
  3       cubelogo showI          \ show e
  4       zero-clock              \ reset
  5       tick                    \ startp
  6           cubelogo update     \ show e
  7       tock                    \ end op
  8       cubelogo reset          \ resete
  9                               \ stop and waiy
 10 ;
 11
 12 \ (NOTE: CHECK OUT SCREEN #29 FOR AF
 13 \ OBJECTS (EXCEPT IMAGE OBJECTS))
 14
 15
ok
```

4 ***This list is for the object LOGO, loaded by 1 LOAD and run by LOGO. A GLOSSARY can be found from P.33 explaining such terminology.***

5 ***Now typing 1 EDIT we enter Cybermate's editor mode for screen 1, each screen of which contains a maximum of 16 lines of code.***

6 ***Change 30 to 10 in line 2 and save with the F1 function key, which also exits the EDITOR. Type 1 LOAD to enter the modified program then type LOGO.***

```
                Scr: 1          Buffered lii
  0 \ SPHERES
  1 : BALL
  2   SPHERES SHOW1
  3 RESTORE
  4 ;
  5
  6
  7
  8
  9
 10
 11
 12
 13
 14
 15
^W: Cut-word    ^T: Tack-word   ^K: Cute
^X: Clr-Scr     ^P: Fwd-Scr     ^R: Bacr
F1: Save-Edit                   UNDO: Restt
```

7 ***Now let's create our own CYB file! Type in 1 CREATE-FILE A:\ANYNAME.CYB, next OPEN A:\ANYNAME.CYB, then 1 LOAD 1 EDIT, then as above.***

8 ***It is important to have RESTORE as the last word of any code to restore you to the Cybermate interpreter screen, and also ; to end code***

9 ***The above happens if you leave it out! You can make everything normal again by typing in RESTORE. Typing in BYE quits Cybermate, while NEW! erases all current information.***

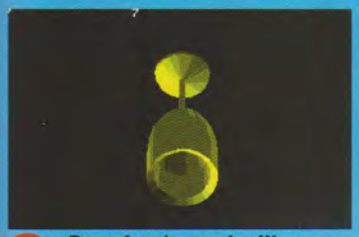
10 ***By copying the example for CUBELOGO we can quickly get some code up and running! Change line 1 to a name other than LOGO, then replace all CUBELOGO words with your sequence name – ANYNAME.***

```
ok
ok
ok
ok
ok
1 LIST
Scr # 1
  0 \ Simple Sequence Procedure
  1 : SPHERES
  2       30 SPHERES rate         \ updats
  3       SPHERES showI           \ show e
  4       zero-clock              \ reset
  5       tick                    \ startp
  6           SPHERES update      \ show e
  7       tock                    \ end op
  8       SPHERES reset           \ resete
  9                               \ stop and waiy
 10 ;
 11
 12 \ (NOTE: CHECK OUT SCREEN #29 FOR AF
 13 \ OBJECTS (EXCEPT IMAGE OBJECTS))
 14
 15
ok
```

11 ***When you've finished in EDIT mode, SAVE with the F1 key, load the new code with any changes with 1 LOAD and run the code with CYB name, in this case anyname. If a mistake is detected the ? questions the problem.***

12 ***The 'preview editor' can be entered by loading a sequence, then typing ANYNAME CLONE-AS PREVIEW. Place the disk containing PREVIEW.EDT in the drive and type VIEW. Your first frame is displayed with its RGB colour codes.***

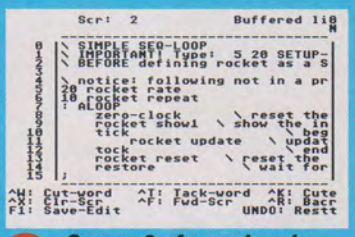
IN MOTION



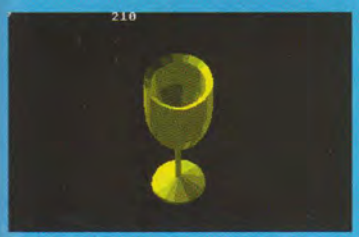
13 *Pressing 'space' will step your sequence through frame by frame. Top left is the frame number, while the middle number is the TICK number. The clock can be set manually with F10 or backwards with F9.*

17 *Click on RECORD, go to the objects menu and, keeping room switched on, select 'cu0' and OK. Record that frame, return again to 'select', deselect 'cu0' and select 'cu1', click on OK, then record. Do this with all numbers.*

21 *In SAMPLE.CYB you'll find on scr 5 how to play two sequences back to back and dissolve between the sequence objects cubelogo & cubeball. This is already done for you: activate it by 1 LOAD and MOVIE1.*



25 *Screen 2 of sample.cyb code was changed to accommodate the different sequence of my rocket going around a planet. New names were added in place of the old. This code is executed differently.*



14 *Pressing RETURN starts continuous display, HELP toggles the clock on/off, while numbers 0-9 are animation rates 1 to 90. The above example shows 30 ticks/frame or number 3, eg.210/7=30.*

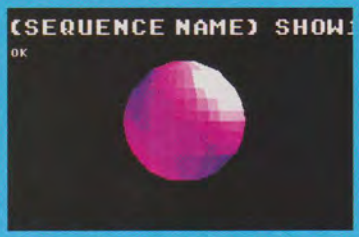
18 *When you get to 'cu*' click on the 'front' window; select all cubes except the room. Click on 'rotate', making 'H'=-180°. Go to the objects menu, again select 'none' and then select 'room' followed by 'cu18' and record.*

22 *It starts with calling a machine code operation [] dissolve, and using this on the two sequence objects, which MUST have been earlier loaded. Load your sequences in an open filename.cyb files in interpreter mode before beginning.*

26 *This particular code is started by typing 5 20 SETUP-LOOP from interpreter mode before defining rocket as a SEQ-LOOP object. The object name is ALOOP as the colon is the beginning of the code (:)*

15 *Quit PREVIEW with undo. For use of some example files you will need to create a DLT file called CUEBALL. Load CAD3D2 then (from examples folder) CUBEROOM.3D2, merge CUBALL.3D2 with this.*

19 *Keeping the room, deselect 'cu18', record, and select 'cu17', record, deselect and select 'cu16' until 'cu0', then end recording by clicking on the 'ON' film. CUBEBALL.3D2 has now been converted to CUBEBALL.DLT.*



23 *Tick and tock are the beginning and end of a loop. While show1 can be used to display the first picture image, eg. SEQUENCE NAME SHOW1, typing in restore will return you to interpreter mode.*

27 *Anything preceded by a backslash is comment, but spacing is important. If you typed \notice for example you would get a ? from Cybermate's interpreter meaning you got something wrong again!*

16 *A cube is needed which follows the movement of the pattern. In OBJECTS, click on Select, then NONE. Select 'room' and then save as 'CUBEBALL.3D2', click on RECORD, select CYBERMATE and load 'CUBEBALL.3D2'.*

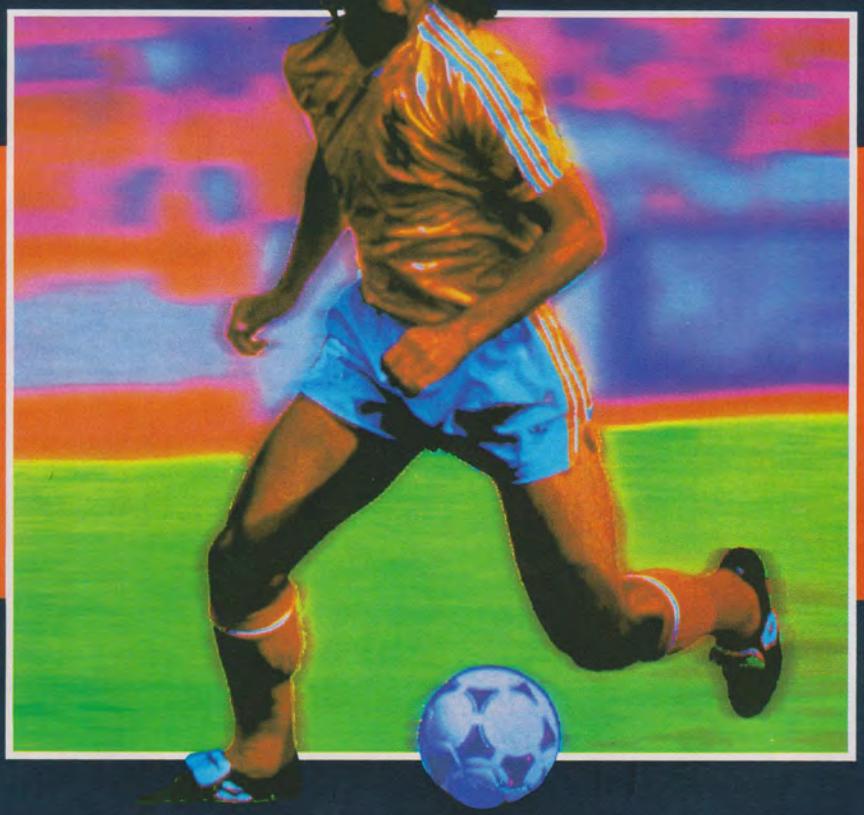
```
OPEN SAMPLE.CYB              (return)
PRINTING ON                  (return)
0   30   INDEX               (return)

Print a few lines, form feed

0   30   TRIAD               (return)

When finished

PRINTING OFF
```

20 *CUBEBALL is used with the sample code on SAMPLE.CYB. This can be printed from within the interpreter mode. OPEN SAMPLE.CYB then PRINTING ON, 0 30 INDEX, print a few lines, form feed, type 0 30 triad, turn off with PRINTING OFF.*

24 *This rocket was made to move around the planet with a seq-loop. As usual it was created and animated from within CAD3D2's RECORD function and saved as a DLT file. This is then entered in the editor as follows.*

28 *A folder called hardcopy is on disk one; in this is a print program for the PI1 or PI3 data files. This program will output to printer or plotter, also a metafile output for use in DTP packages is supported.*

Sensible SOCCER



WORLD CUP QUALIFIERS

NEW SEASON TEAM INFORMATION

NEW NATIONS
-
LATEST TRANSFER DETAILS

ADDED FEATURES

RED & YELLOW CARDS
-
SUSPENSIONS
-
ENHANCED GOALKEEPERS
-
BACK PASS RULE

European Champions

1992/3 SEASON EDITION

NEW ENHANCED VERSION OF THE GREATEST FOOTBALL GAME EVER

For existing owners of Sensible Soccer – European Champions who want to have the new version, just send a cheque or Postal Order for £4.95 (inc p&p) made payable to Sensible Soccer Offer, along with your original DISC 1 to Sensible Soccer Offer, c/o Unit B3 Edison Road, St. Ives, Huntingdom, Cambs PE17 4LF. Both sets of discs will be returned to you within 14 days of receipt (allowing for cheque clearance).

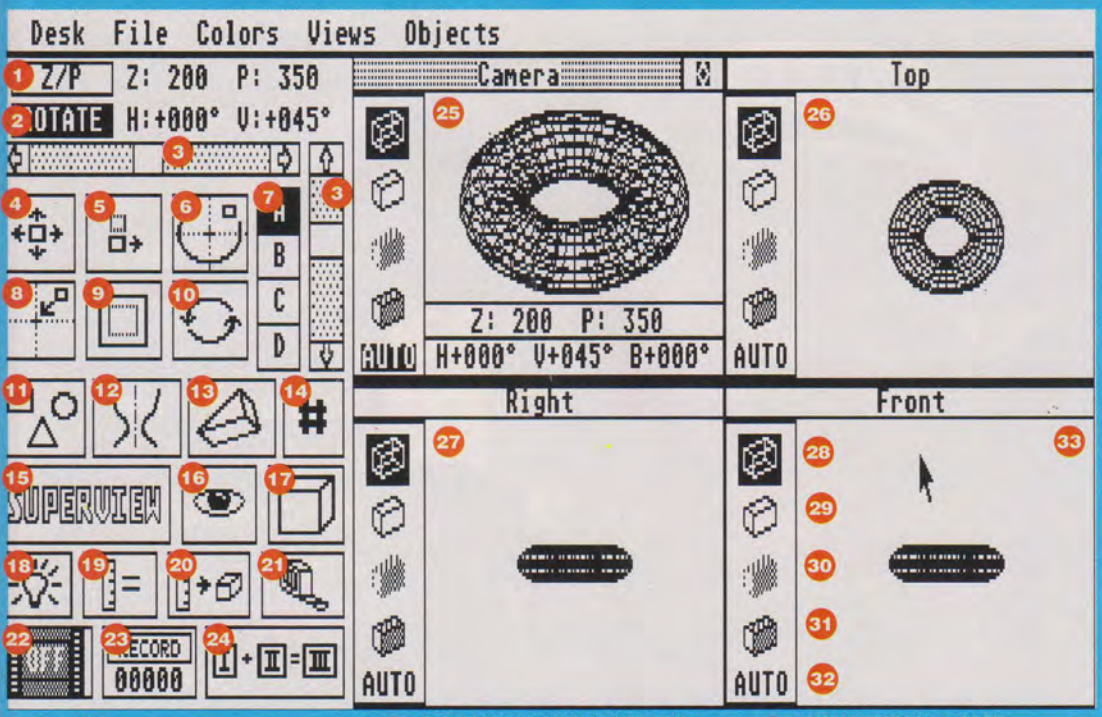
Sensible SOFTWARE

C1, Metropolitan Wharf, Wapping Wall, London E1 9SS © 1992 Sensible Software. Published by Renegade

ICON DO THAT

There is a bewildering array of icons in CAD 3D. They are explained here and this guide should be used in conjunction with the tutorial on pages 18-19

STEP BY STEP



1 *Z/P*
Z=Zoom value of camera view 0 to 999
P=Perspective of camera view 0 to 999

2 *ROTATE H/V*
H=Rotate selected window view Horizontally -180 to +180
V=Rotate selected window view Vertically -180 to +180

3 *Horizontal and vertical slider bars which affect the values of Icons (1) and (2) above respectively.*

4 *SELECTED FRAME MOVEMENT*
Four arrows mean the object can be moved in any direction. Two arrows (left to right) mean the object may only be moved horizontally. Two arrows (up and down) mean object can only be moved vertically.

5 *OBJECT SELECTION (single showing)*
Default setting, your are able to move single objects one at a time. If two boxes in this icon are selected then a group of objects (all visible) are moved when you move any single object.

6 *ROTATE AROUND CENTRE*
As default an object will be rotated clockwise around the centre of the window area. The two other settings are for the centre of rotation to be that of a group of objects, and a selectable centre of rotation by you.

7 *WORKSCREENS*
A,B,C,D are four separate buffers, and it is easy to cut and paste between these. They're used when you don't wish to affect an object globally or when you want to have an uncluttered work area.

8 *CENTRE OBJECTS*
Centres all objects or the centre of a group of objects (if more than one)

9 *OBJECT GROUP SIZE*
Enlarge or reduce a selected object or group of objects in a range of 50 to 200 percent

10 *OBJECT GROUP ROTATION*
Rotates an object dependent upon what mode Icon (6) is in, and also the degree of which it rotates (between -180 to +180)

11 *PREDEFINED 3D OBJECTS*
Choose from three spheres and also a Torus, Cube and Wedge, selecting a colour range and name for the 3D object.

12 *SYMMETRICAL SPIN*
Ideal for the creating of any symmetrical objects, like tubes etc, a separate work area is provided for you when selected.

13 *EXTRUDE*
Used for creating non-symmetrical objects such as triangles, stars etc.

14 *OBJECT DATA*
Details of object name, number of vertices and faces it contains are given, plus the maximum available, used, and remaining.

15 *SUPERVIEW*
Selecting this gives an update of the camera view, in colour if either icon (30) or (31) are selected.

16 *EYE VIEW*
When selected you are presented with the latest update in memory. It doesn't redraw as superview so is much quicker for reference.

17 *FACE DIRECTION (of cubes)*
Depicted by rectangle within cube so as to know front from back.

18 *LIGHTING EFFECTS*
Used on objects to create highlights, shadows and always needed to see them!

19 *SET MEASUREMENT SCALE*
Feet or metres can be chosen and the 3D universe scaled to size with all its contents.

20 *MEASUREMENT OF OBJECT*
The size of an object can be affected to the exact proportions that you require from this icon.

21 *TAPE MEASURE*
Used this to establish the precise measurement of object by stretching it over an objects length with mouse. Place and drag it while holding the left button down. Hold down right button to deselect.

22 *ANIMATOR FILM*
When this is selected you can enter any file with .3D2 extension, this is then converted to DTL and saved as such.

23 *FRAME RECORDER*

24 *OBJECT JOINER*
Objects are joined by adding one to another within this icon command.

25 *CAMERA WORKSCREEN*

26 *TOP WINDOW*

27 *RIGHT WINDOW*

28 *WIRE FRAME*

29 *HIDDEN LINE REMOVAL*

30 *SHADED*

31 *SHADED WITH LINE*

32 *AUTO*
Switches window update on or off.

33 *FRONT WINDOW*

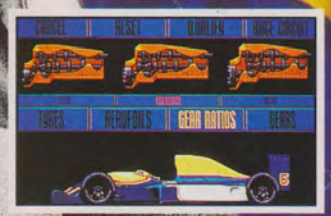
NIGEL MANSELL'S WORLD CHAMPIONSHIP

The most exciting racing driver in the world has teamed up with the greatest racing game producers to bring you the definitive Grand Prix experience.

- Race the full 1992 season in the superb Canon Williams Renault F1 car.
- Real time coaching from Nigel Mansell himself.
- Experiment with the cars set up to achieve maximum performance for each of the 16 race circuits.
- Fast and furious race action with actual Renault F1 engine sound FX and superb detailed graphics.

THE REALISM OF THE RACETRACK....
THE POWER AND THE GLORY!

RENAULT F1



Screenshots from Amiga version

FORMULA 1 WORLD CHAMPIONSHIP

Gremlin Graphics Software Ltd.,
Carver House, 2-4 Carver Street,
Sheffield S1 4FS. Tel: 0742 753423.

GREMLIN

BECOME A GRAND PRIX LEGEND IN A RACE FOR THE TITLE OF WORLD CHAMPION

LICENSED BY FOCA TO FUJI TELEVISION COPYRIGHT GREMLIN GRAPHICS SOFTWARE LTD 1992.

THIS MONTH'S COVERDISKS!

On page 18, you'll find a complete tutorial for Cyber Studio, whilst the loading instructions are printed here. There's also a special coupon for anyone that wants to order the full Cyber Studio manual

TIMEWORKS ART

TIMEWORKS ART FOLDER • USE WITH TIMEWORKS • CLIPART • DISK 1

A collection of pictures to import into Timeworks or other graphics packages

A few of the pictures available for you to download into Timeworks.

In this folder, you will find five files of clip art for use with this month's ***Timeworks*** tutorial, starting on page 106. You can make use of clip art in many other programs, including ***First Word Plus***, and it can be a valuable way of adding character to your finished document. Turn to the tutorial now for more information.

EVADER

EVADER • EXCLUSIVE GAME BY DAVE MUNSIE • JOYSTICK • LOW RES • DISK 2

We scour the world to bring you the best and this program from the USA is a perfect example

Check out Evader, a great exclusive game from America.

Written in GFA Basic, ***Evader*** will appeal to games players and programmers alike. To run the game, copy the folder called ***Evader*** to a blank, formatted disk and reset the computer to low resolution. Then simply double click on the program EVADER.TOS and follow the on-screen instructions. The game is fast and challenging and, the surprising thing is, a complex game such as this takes up only 140K of disk space!

Watch out for more of Dave's programs on forthcoming cover disks and details of how you could write games as good as this for yourself.

SLUG 2092

SLUG 2092 • EXCLUSIVE GAME BY MARK TERRY • JOYSTICK • DISK 2

Another great exclusive game for you. This time it's an updated version of an old favourite

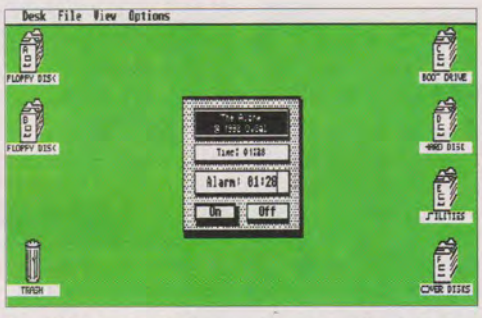
Rescue the baby slugs and kill the robots in another great exclusive game.

Baby slugs have been captured and are being held in a heavily fortified complex. You must send in your team of slug mercenaries to rescue them and cause as much damage as you can in the process. Doors are timed and will not open straight away. Move close to the baby slugs to rescue them. There are extras that will help you as you travel around. Shields will give you limited protection and smart bombs will kill every baddie on the screen. Points are scored for any gold that you pick up along the way, each baby you rescue and all of the robots that you kill. Use the space bar to quickly move on through the score screens between the action.

ALARM

ALARM • EXCLUSIVE UTILITY BY OFIR GAL • ACCESSORY • DISK 2

It's easy to lose track of time when using your ST. This simple little accessory will give you a reminder of important events



A utility to remind you when to make the tea.

Place the two files ALARM.ACC and ALARM.RSC in the root directory of your boot disk (not in any folders of the disk you use when you turn the computer on). It can then be found under the Desk menu on the desktop. Use the 24-hour time format (6:00pm is 18:00) and click on the OK button. The alarm will go off at the specified time. Remember to set the system clock, though. Use Xcontrol or any control panel or clock setting program to do this.

AUTO BAK

AUTO BAK • EXCLUSIVE UTILITY BY ALEX MCMANUS • ACCESSORY • DISK 2

Get rid of those annoying backup files from First Word with this handy accessory

Auto Bak will delete .BAK files or any other specified extender.

When you're working with ***First Word Plus*** and other programs, saving a document after making changes causes the program to automatically save the last version with the extension .BAK. This is a great idea, but it takes up twice the disk space. This exclusive program will automatically delete these .BAK files, saving time and space on the disk. You can run the program by placing it in the root directory of your boot disk and using it as an accessory, or by renaming it AUTO_BAK.PRG (using the Show Info option), you can run it by double clicking on it.

DIAMOND FORMAT

DIAMOND FORMAT
DIAMOND FORMAT 2.1 • DESK ACCESSORY • DISK 2

Ever wondered how to cram more onto your disks? This formatting program is more flexible than the desktop and has other surprises too

This program is the formatter that accompanies the excellent Diamond Back II hard disk backup program. It is fully featured and will format disks up to 82 tracks and 10 sectors. It will also format disks so that they can be read by a PC and you can run it as an accessory or

The Diamond Formatter will even add an MS-DOS boot sector so your ASCII text could be read on a PC.

as a program by changing the extension to .PRG. Read the document file supplied for more information.

HEAVENLY MUSIC

HEAVENLY MUSIC • EXCLUSIVE MIDI FILE • DISK 2

Joe and Pauly Ortiz show how a sequencer should be used for maximum effect

This one's for all you musicians out there. It's a piece of music called Angel Talk that is configured for general MIDI and will run on any sequencer. There's a comprehensive read me file on the disk with lots of information on Heavenly Music and what they have to offer.

MAGNIFY

MAGNIFY • UTILITY • DISK 2

Another useful utility from Double-Click – a handy aid for DTP and art packages

This program magnifies the area around the mouse and can even bring it up to full screen. It's ideal for adding those fine touches to your art or DTP work. It's fully configurable and, when placed in an Auto folder, can be called up at any time from a preset key combination. To run, place the program DCR_TMAG.PRG in an Auto folder on your boot disk and switch the computer on. You can configure the program by double clicking on it from the desktop and using the menu which appears.

CYBER STUDIO OFFER

1 MEG ONLY!

The complete version and comprehensive manual

Please send me a complete copy of Cyber Studio for £34 (inclusive of VAT and P&P.)

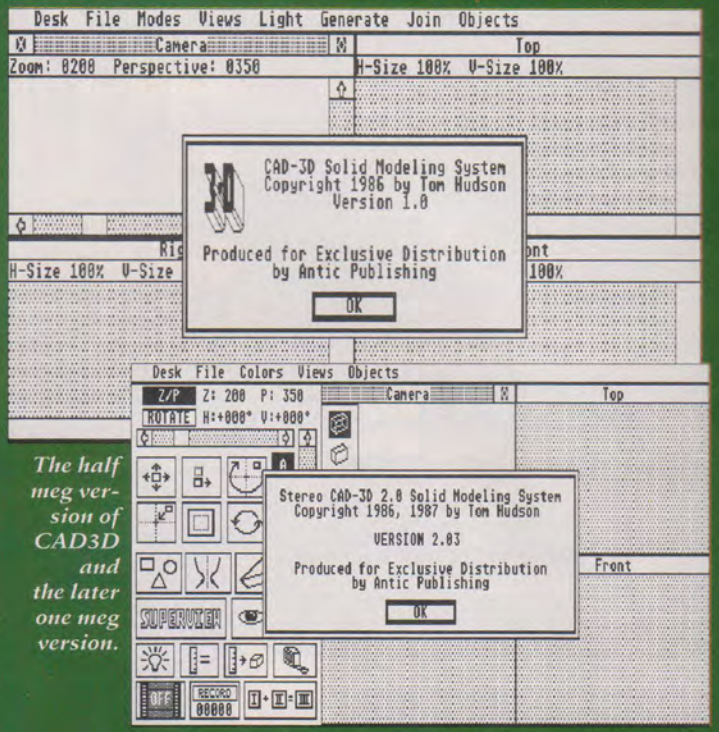
Name:.....
Address:.....
.....
.....
Daytime phone:.....
Visa/Access no.....
Expires.....Signature.....

Send cheques/PO made payable to GST Software Products to **Softline, GST Software Products, Meadow Lane, St Ives, Cambs, PE17 4LG** and allow up to 28 days for delivery.

HOW TO LOAD CAD 3D

CAD 3D is simple to load. Here's how

A full tutorial is provided to get you up and running with the first part of our great Cyber Studio giveaway on page 18. There are two versions of CAD 3D on the cover disks. The latest version runs on systems with a minimum memory of one megabyte and is on disk one. If you have a half meg system, you can still run version one of the program and you'll find it on disk two.



The half meg version of CAD3D and the later one meg version.

HALF MEG SYSTEMS

CAD3D is in a folder called CAD3D1. Simply open the folder and double click on the program called CAD3D.PRG. The program will then run automatically.

ONE MEG AND OVER

Switch your computer off and insert you backup of cover disk one into the drive. All of the extras will be loaded in automatically. All you need to do to run the program is double click on CAD3D2.PRG.

PRINT UTILITIES

PRINT UTILITIES FOLDER • DISK 2

Here are a couple of useful print utilities to help you along

PRINTSET.ACC is an accessory that will allow you to send control codes to your printer from within any GEM based program. You could, for example, call up a different font to add style to a document from a text editor.

UNIPRINT.PRG is a high resolution Degas Elite printing utility for Epson 24 pin printers and compatibles. It offers three different methods of printing a Degas picture.

TOS FIXES

TOS FIXES FOLDER • AUTO PROGRAMS • DISK 2

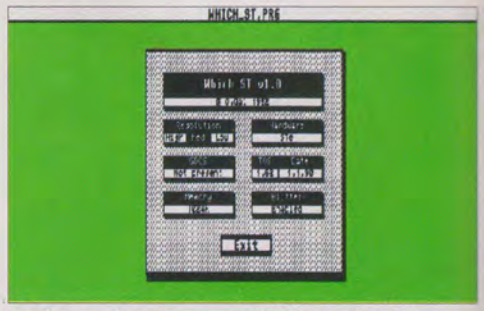
A selection of bug fixes for TOS

There are five different fixes here for various TOS problems. You don't need them all, so read the accompanying text files to find out what each one does and whether you need it. To use a fix, place it in an Auto folder on your boot disk and reset the computer.

WHICH ST

WHICH ST • EXCLUSIVE UTILITY BY OFIR GAL • DISK 2

Find out exactly what setup you have on your ST with this simple utility



Find out what version of TOS you're using and what else is going on inside your computer with Which ST?

Run this exclusive program to find out exactly which ST you've got. It will be able to tell you what hardware you have, which TOS version and the date, whether GDOS is present, what memory configuration you have and whether you have a blitter chip enabled or not or even installed!. You will find this program extremely useful for checking if your memory upgrade is installed properly. Just the thing for satisfying the terminally curious.

HCS

ATARI MEMORY UPGRADE SPECIALISTS

MEMORY UPGRADES

HCS STE and MEGA STE UPGRADES

HCS STE memory upgrade kits come complete with full instructions designed for the novice. The complete job should take no longer than 15 minutes. 2 and 4 megabyte kits come with free utilities disk and multitasking software.

Upgrade from 520 to 1040 .....£13.99
To 2 Megabytes.....£49.99
To 4 Megabytes.....£94.99

STF (M) and Mega ST upgrade kits

Xtraram Deluxe plug in upgrading system fits inside the computer. It can upgrade your computer in stages to 1Mb, 2.5Mb* and 4Mb. The kit comes with comprehensive instructions designed for novices. The kit uses SIMMS, so is easily upgradeable.

MARPET XTRARAM *DELUXE* QUALITY SIMM UPGRADING SYSTEM
Formerly Frontier
Upgrade from 520 to 1040 .....£44.99
To 2.5 Megabytes.....£79.99
To 4 Megabytes.....£119.99

Solder in Kit

The solder in kit will upgrade the 520ST to 1Mb. Electronics experience is required as much soldering is needed. Check your RAM chip configuration before ordering: 4 or 16 chips, SMD or DIL.

Solder in kit (all versions) £25.00

REPLACEMENTS

The HCS power supply and disk drive upgrades come complete with fitting instructions and plug straight into the ST without soldering. The Power supply produces less heat than the original so is more reliable.

Replacement power supply £39.95
Double sided disk drive kit £47.00

ACCELERATORS

The AD speed made by ICD fits in place of your microprocessor. It uses a 68000 chip running at a switch able 16Mhz with cache or standard 8Mhz to give virtually 100% compatibility. The 68030 SST for the Mega ST gives phenomenal speed with a 68030 running at 50Mhz! The SST has space for 8Mb on board RAM, TOS2 included.

AD Speed ST £145.00
AD Speed STE.....£165.00
68030 SST - 50.....£550.00
Fitting for above.....£35.00

INTERFACES

The "AdSCSI" ICD host adapter gives SCSI output from the STs DMA port, complete with software and full documentation, DMA cable and hard drive formatting software. Multirez allows the ST to display all 3 ST resolutions on the multisync monitor. The forget me clock sets your STs time and date, with cartridge-through port.
Keyboard interface allows the use of external PC compatible keyboards on the ST.

AD SCSI.....£69.99
AD SCSI Plus (with clock).....£79.99
Keyboard Interface £55.00
Multirez.....£44.99
Forget Me Clock.....£16.99

SAME DAY REPAIRS IN LONDON

SAME DAY FITTING AND REPAIRS TO COMPUTERS AND MONITORS. REPAIRS FROM £29.99

★ We offer a discount fitting service when your upgrade is purchased from us!
★ Most repairs have same day turnaround on a booking system
★ Repair charge includes labour and smaller items of repair
★ Ask for a TOS 1.4 upgrade at the same time as your repair for only £25.00
★ All repairs carry 90 day warranty

GEARED TOWARDS MUSICIANS

MONITORS

14" Super high resolution 0.28mm dot pitch monitor is compatible with TT, PC, Falcon and Multirez. The new HCS MM140 Monochrome monitor has tilt/swivel base and 14" tube. Fully compatible with all monochrome ST software.

Multisync colour monitor £280.00
SM144 14" FST Monochrome.....£115.00

MODEMS

HCS Smart Modem 9600 has full FAX capability for send and receive. Auto-answer, pulse or tone dial, automatically determines incoming calls as fax or modem, industry standard command set with support for V22bis, V22, V21. Fully Hayes compatible. All types c/w PC software. ST fax software option supports most ST graphics formats including Pagestream and Calamus for immediate composition and send. Modem 2400 has all above features but without fax. Smart One14400 comes with MNP level 1-5 and Fax capability. Using V42 bis gives a maximum effective thruput of 58000bps!!! All types come complete with cables.

Smart One ™ 2400 .....£59.99
Straight Fax software.....£45.00
Smart One ™ Fax with ST FAX software.....£139.99
Smart One ™ Fax with only PC software £119.99
Smart One ™ 14400 Fax MNP V32,V32bis, V42,V42bis etc £249.99

PROTAR HARD DRIVES

Progate II 40.....£288.88
Progate II 40DC.....£349.99
Progate II 50DC.....£349.00
Progate II 120DC.....£469.00

The Vortex 386 emulator runs at 16Mhz and allows true multitasking in PC mode on the ST. Space on board is provided for a 387 CO Processor and 512K of FASTRAM. Norton factor 15!

VORTEX 386 SX-16.....£330.00
387 CO-PROCESSOR £117.00
FASTRAM CACHE £30.00

SPECTRE GCR MAC EMULATOR

Spectre GCR cartridge gives 20% more speed and 30% bigger screen area on the standard ST. Compatible with the TT.

SPECTRE GCR (Inc. 128K Roms).....£300.00

Atari TT2 .....£1050.00

HOW TO ORDER

Enquiries and credit card orders please
Fax/Call on (071) 252 3113
Please phone with enquiries between
Mon - Fri 10.30am to 6.00pm. Sat 10.30am to 2.00pm
Enquiries cannot be taken by post.
For mail order please send description of goods and cheque/PO to:

HCS
Dept 10, 144 Tanner Street
London SE1

MasterCard VISA Access EUROCARD

Prices include VAT and P & P
Goods normally dispatched within 2 working days. E & OE

5 YEAR GUARANTEE ON MEMORY

Marpet No1 distributor, Exclusive Best Data UK distributor, Exclusive Joppa Software UK distributor, Gadgets UK distributor.

14 DAY NO QUIBBLE MONEY BACK GUARANTEE

WORKSHOP ADDRESS

HCS ENGINEERING, 144 Tanner Street, London SE1
REPAIRS AND SERVICE telephone number NOT MAIL ORDER: 071-252 3553

Feed Your ST

Now only £199 ...

Reflex Graphic Card

... and with Special Monitor Packages!

Full screen .IMG snapshot from Qume 15" monitor using Reflex Utilities

Experience the most cost–effective, versatile, high resolution graphic card for the Atari STE or Mega ST.

Experience high res. compatibility with virtually any monitor, including SM124 and MultiSync's.

Experience the superb Reflex Utility program for amazing features such as x4 zoom, mouse accelerator, smooth scolling to Virtual screens of 1024x1024, full or partial screen snapshots etc.

Experience the renowned compatibility of Reflex with virtually all software, and peripherals such as Spectre GCR & 68030 processor boards.

Experience simultaneous <<Dual–Screen, Multi–Tasking>> with software like the Virtuoso sequencer.

Experience the PC emulator, AT Speed, switching between PC applications on an Atari monitor and high res. GEM programs through the Reflex monitor.

These Experiences could be yours.

- *Standard SM124, 125 or 144 monitors to 1024x960!*
  - ***Actual screen display with smooth virtual screens to 1024x1024***
- *Optional 15" A4, MultiSync, FST Monitor*
  - ***Superb clarity @ 800x1024 or 1024x870. C/w PC graphic card***
- *Optional 21" A3, FST Monitors*
  - ***Hitachi or Eizo FlexScan, both with Dynamic Focusing feature***
- *Designed with proper Video RAM for FAST operation*
  - ***Fully compatible with Blitter chip***
- *Compatible with virtually all software & hardware*
  - ***NeoDesk, 68030 boards, Spectre GCR, Accelerators***
- *Performance enhancing software utilities*
  - ***Zoom, Mouse accelerator, Virtual screens, IMG screen snapshot***
- *Simple plug–in fitment to all Mega ST's*
  - ***No soldering. Support for TOS V1.2 upwards***
- *Fitting kit available for 520/1040 STE*
  - ***Unbelievable performance for entry level machine***
- *Cost–effective graphic power at £199*
  - ***Minimal investment for high specification***

All prices exclude VAT & carriage
Educational & Trade enquiries welcomed
All major credit cards accepted
ACCESS – MASTERCARD – VISA

TITAN Designs Ltd
Inst. of Research & Development
Univ. of B'ham Research Park
Vincent Drive, Birmingham B15 2SQ
TEL: 021–415 4155 FAX: 021–415 4156

NEXT MONTH

DON'T MISS THE SECOND PART OF THE CYBER ANIMATION AND GRAPHICS SERIES – CYBER PAINT!!

COLLECTS INTO THE MOST COMPREHENSIVE DESIGN AND ANIMATION PACKAGE EVER!

COLLECT THE WHOLE SERIES

CYBER STUDIO

As you've already got this program, you've seen just how professional it is. And if you've used ***Cybermate*** to animate your designs then next month's part of the series is an absolute must!

CYBER PAINT

On next month's cover disks will be the excellent ***Cyber Paint***, the sister program to this month's offering. You'll be able to create your own 2D animations or use ***Cyber Paint*** to finish off the 3D design that you did with this month's disk!

CYBER CONTROL

And finally, in the February issue, the last package in this amazing trio will be ***Cyber Control***. It's a fully-operational, commercial package that will allows you to animate your Cyber Series designs quickly and easily. It has an easy to use interface which takes commands from you and then works out the animation itself.

Cyber Studio on this month's cover disk – this is just the beginning!

Use Cyber Paint to create 2D animations.

Cyber Control rounds up the series.

CHRISTMAS STOCK IN

A full round-up of all the latest games out for Christmas, including Legends of Valour, Reach for the Skies, Scrabble, Archer Maclean's Pool, D-Day, Indiana Jones And The Fate Of Atlantis, MacDonaldsland and many, many more!

TUTORIALS GALORE!

Everyone can make their ST sing with our step-by-step tutorials, and next month well be showing you how to get the best out of applications and how to install them to best effect.

BUSINESS AS USUAL!

And as ever, we'll be showing you the best in new products, casting our eyes over some of the older ones and having a sentimental look back on some of the great events of 1992.

WORTH OVER £140

Cyber Studio, Cyber Paint and Cyber Control are all programs that can be used in their own right. However, when used together, they form the most comprehensive art, graphics and animation system available on the ST. We're rightly proud of the Cyber Studio series that we're giving away over the next couple of months. It consists of a series of three packages that build into an amazing, high-tech system. Draw complex 3D shapes easily using CAD-3D, paint them with Cyber Paint and finally animate them all quickly and easily using Cyber Control. It couldn't be simpler!

ST REVIEW CONSISTENTLY GIVES THE BEST VALUE OF ANY ST MAGAZINE

NO OTHER MAG COMES NEAR IN TERMS OF SIZE, QUALITY OR PURE VALUE FOR MONEY

THE BEST EDITORIAL, THE BEST COVERDISKS AND THE BEST BUY FOR ANYONE WITH AN ST

ON SALE 14TH DECEMBER DON'T MISS OUT – ORDER IT NOW!

UNDER THE MAGNIFYING GLASS

WE TAKE THE LID OFF THE FALCON

GENERAL GENERAL

You've read the hype and you've seen the photos – now find out what the Falcon can really do. . .

Let's make no bones about it. The Falcon030 is the most exciting computer to hit the home market since the original Atari ST seven years ago. Being one of the first 16-bit machines available, it broke ground in a way that no other domestic computer has since. From games to music to professional DTP, the ST has found its way into more areas than any other computer.

Will the Falcon have the same effect on the market? Judge for yourself here. . .

A WALK AROUND THE DESKTOP

Many aspects of the enhanced Desktop for TOS 2.06, which has just become available for the ST, have been incorporated into TOS 4.00 within the Falcon. The menus shown here illustrate this quite clearly.

The keystrokes are programmed from the Desktop Configuration in the Options menu; and any of the menu entries can be set in this manner.

Programs can be automatically launched by assigning function keys to them, and the list of these is also kept within the Desktop Configuration. Have a close look at figure 1 on the opposite page; the System Free Memory shows nearly 14 Megabytes, a figure that is rather unobtainable on an ST, to say the least!

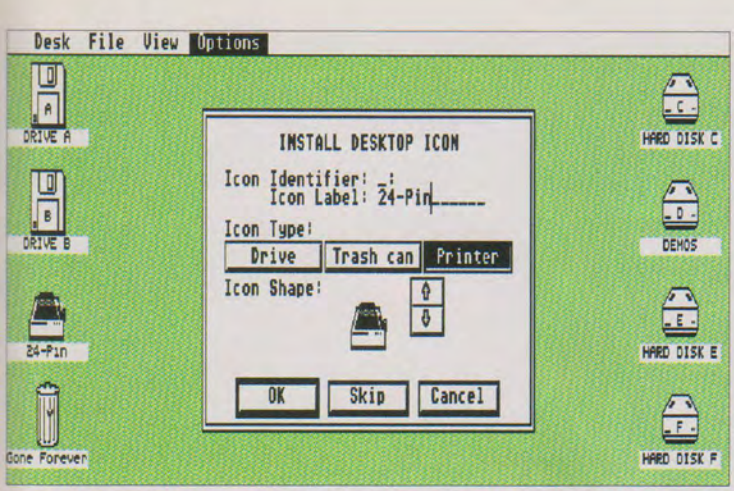
SET UP FOR THE SCREEN

One new menu item is that of Set Video Display, which is necessary because of the change in video support of the Falcon. Compatibility Modes immediately allow you to choose low, medium or high resolution for compatibility with existing ST monitors. You can even select high resolution on a standard ST medium resolution monitor, and in this respect it acts as the equivalent of a mono emulator. It's certainly as good as any of the software ones that we've seen. The number of colours can be between two and 'True Colour' (65,536 colours), while Columns refers to how many pixels wide the screen is – 320 or 640.

THE POWER OF THE FALCON

There are two chips inside the Falcon which give it immense power and make it capable of out-performing any current home computer. The first of these is the 68030 micro-processor, the heart of the Falcon, which is a member of the same family as the 68000 found in the ST. The second is a Digital Signal Processor (DSP), a chip specifically designed to process digital information at a very high speed.

While not included as standard, there is also space on the board for a Maths Coprocessor which is effectively a fast number cruncher; any mathematics being carried out by the 68030 can be offloaded



The Falcon Desktop is very similar to the version incorporated into TOS 2.06.

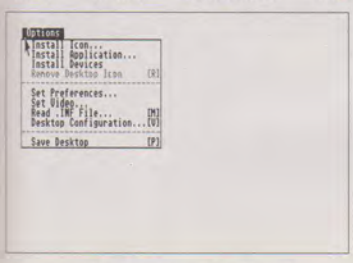
to the coprocessor to free the main processor up for further operations. By way of example, complex graphic editing will certainly benefit from the existence of a maths coprocessor.

From a picture point of view, the Video chip is capable of giving up to 640 pixels horizontally, as with the ST, but 480 pixels vertically, 80 more than the ST.

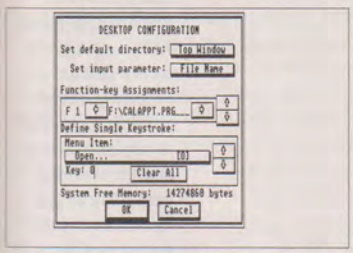
This can be further increased to 768 pixels horizontally by 576 pixels vertically by using a process called Overscan, the hardware for which is included within the Falcon.

The result of this is the ability to display far more on a screen connected to a Falcon than the comparable screen with an ST. As for colours, the sky is practically the limit in this respect – up to 65,536 colours can be displayed on-screen at once.

While the monitor socket is a 19-pin D-type, various different adaptors can be bought in order to match this up with the plug for the monitor.



Menu entries now have keyboard equivalents (which are shown after the item) for direct selection from just a single key stroke.



The look and feel of the Desktop can be altered from the Desktop Configuration, including the keystrokes for any of the menu options.

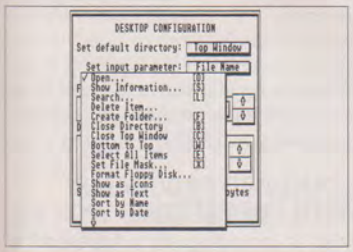


Figure 1: Function key assignments are listed in the Desktop Configuration. Have a look at the System Free Memory – nearly 14 Megabytes!

SOUND

As with the ST, the Falcon has a three-channel Yamaha sound chip. However, when you look at what else is in store it is clear that this chip is only going to be used for compatibility purposes!

There's a new sound engine capable of recording and playing back one, two, three or four 16-bit stereo channels of digital audio at 12.5, 25 or 50 kHz.

To put this into perspective, CD uses a recording frequency of 44.1 kHz – the Falcon is capable of handling audio of above-CD quality. The microphone input is also 16-bit stereo, as is the headphone output, both handled by the internal Codec, and there's an on-board loudspeaker.

The DSP can be used to produce incredible results in the way of audio processing. For example, there is no reason why the Falcon can't act as a synthesiser or be used to process music with the relevant software.

The various inputs and outputs can be routed via the internal matrix which can be controlled within any program. Any receiving device can be connected to any one source device, although there is an additional route for the microphone input to be connected to the headphone output, opening

COMPATIBILITY

Atari's general comment about the Falcon is that it is not compatible with programs on the ST. However, ST Review ran a quick compatibility test. The Falcon we looked at had a pre-release version of TOS 4.00, so some incompatibilities will be sorted out on the final version. However, certain types of crash were common:

- lock out when accessing menu bar within a program
- menu bar entered and selection then ignored
- bomb out when trying to use sound

The latter one precludes the use of most games and appears to be down to programmers using an undocumented feature in the ST. This no longer exists in the Falcon, hence the problem.

Of the software we tried, First Word Plus ran fine until we loaded an .IMG file at which point it crashed. Canvas would not load at all, but Degas Elite and Paintpot appeared to work fine. Timeworks installed OK, but locked out as soon as the menu bar was entered while CyberStudio loaded but with screen corruption problems.

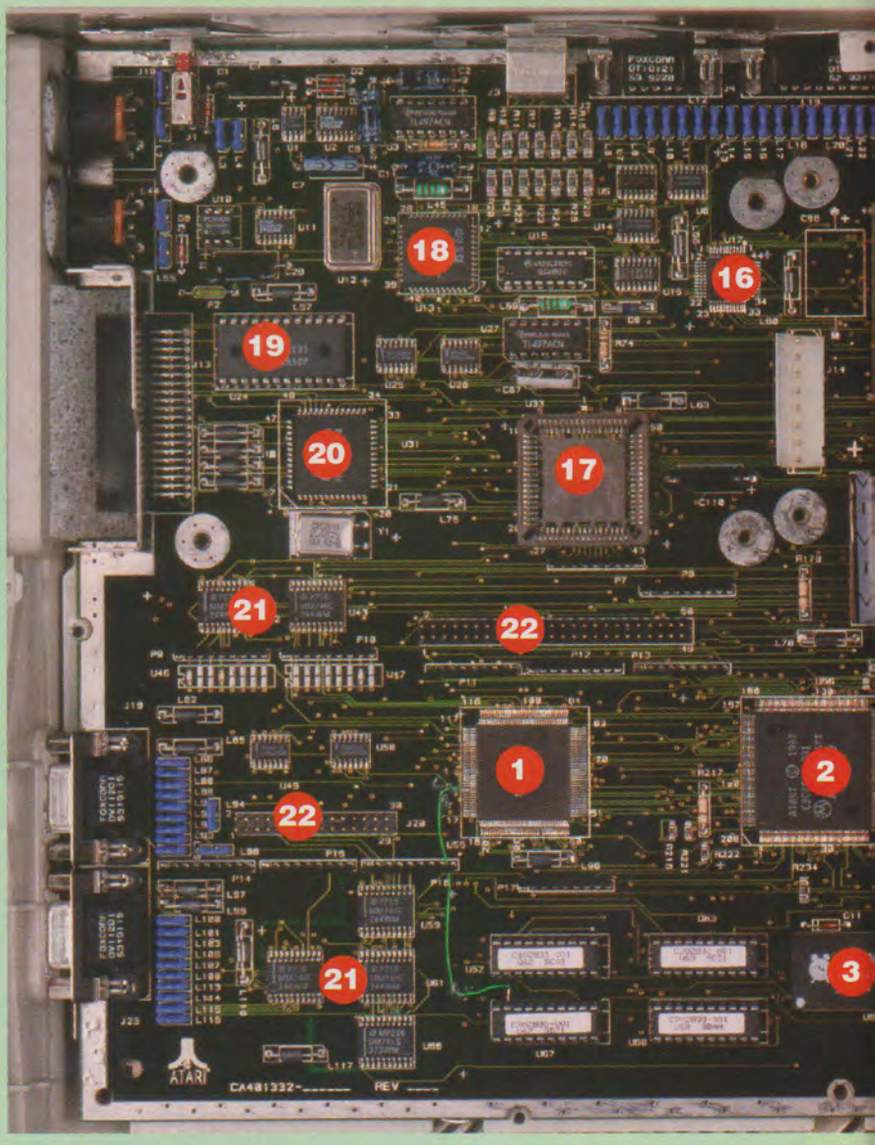
On the music side, Hollis Research Trackman seemed to work as did Gajits' Sequencer One Plus, until the sample facility was used at which point it bombed. Band In A Box wouldn't load and neither would C-Lab Notator. As for games, we gave up after trying about six, none of which wanted to know.

It will be interesting to try these again on a proper release machine.

The power of the Falcon's graphics is shown by screens like this. The colour and clarity on screen is phenomenal...

Set Video Display lets you configure the Falcon to your monitor. This includes options for ST monitor compatibility, the number of colours and columns.

INSIDE STORY



1. *Motorola 68030, 32-bit micro-processor running at 16 MHz. The heart of the Falcon, and the same chip on which the Apple Macintosh II series is based.*
2. *New custom 16-bit Logic chip running at 16 MHz and including BLiTTER operations.*
3. *Real time clock chip, battery backed.*
4. *Connectors for the custom memory module which can hold either 1, 4 or 16 Mbyte of DRAM, not SIMMs.*
5. *512 Kbyte TOS 4.00 ROM. The brain of the Falcon, the operating system is resident in ROM as with the ST; MultiTOS, the multi-tasking version, will be loaded from disk.*
6. *Brushless DC cooling fan runs at a whisper.*
7. *Keyboard controller chip watches your typing.*
8. *56001 Digital Signal Processor (DSP) chip running at 32 MHz.*
9. *96 Kbytes of FasTRAM (SRAM) with zero wait-state, specifically for the DSP.*
10. *16-bit stereo Codec chip which handles conversion between analogue and digital sound for both the microphone input and headphone output.*
11. *New Custom DMA sound engine capable of recording and playing back 1, 2, 3 or 4 16-bit stereo chanels at 12.5, 25 or 50 kHz. Potentially giving superior quality to CD.*
12. *AJAX floppy disk controller chip for the 1.44 Mbyte high density (HD) floppy drive.*
13. *SCSI II port controller chip manages data flow.*
14. *Modulator for connection to a standard TV set.*
15. *Video chip which can handle ST Low/Med/High resolutions along with True Colour (16-bit) and VGA with Overscan for increased screen size.*
16. *Yamaha Y3439, three-channel sound chip for ST compatibility.*
17. *Slot for optional Motorola 6882 Floating Point maths coprocessor, used for number-crunching activities.*
18. *Serial port chip (85c30) controlling both the serial (modem) and Local Area Network (LAN) ports, the latter of which is compatible with the MegaSTE and TT030.*
19. *MIDI chip (6850) for controlling all MIDI input/output operations. Same as the ST.*
20. *Multi-Function Peripheral chip (68901) which controls the timers, interrupts and various other tasks.*
21. *Six chips to control the analogue joystick ports, compatible with the STE. Supports four paddles, a light gun and up to 21 buttons each.*
22. *Expansion slot for another processor. Can be used for image processing, emulation of another computer and so on.*

up the possibilities for voice-overs and even karaoke on a Falcon!

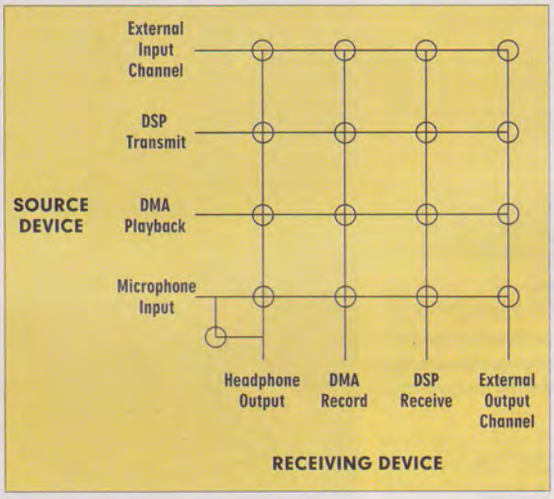
EXPANSION CAPABILITY

Atari has taken the route of not using Single In-line Memory Modules (SIMMs), the method used for memory in the STE and beyond. Instead, they have opted for a custom memory board which can be fitted with a variable number of chips. The sizes that Atari is supporting are one, four and 14 Mbytes, although it is likely that third-party manufacturers will find a way of providing other configurations.

There is also an expansion slot, which has many uses. The most obvious is the ability to fit a processor to emulate another computer – a PC for instance – and run programs which have been written for another machine. While such add-ons exist for the ST, a separate piece of hardware is usually needed.

Although the 68030 is a powerful processor, the big brother of the family, the 68040 is available and in use in the high-end Macintoshes. Will it be available for the Falcon? There is no doubt that a Falcon040 is currently being developed, but the existence of an expansion slot in the Falcon030 offers companies the possibility of incorporating such a chip. For now, though, we'll just have to wait and see. . .

The SCSI2 port is going to be used for more than just hard drives. The port is configured to accept standard CD-ROM drives which will open up a market previously unavailable to a standard ST, a market that Atari is looking to develop in 1993.



This grid shows how the various audio elements can be configured within a program on the Falcon. A receiving device can be connected to any one source device, with the exception of the microphone input which can be connected directly to the headphone output without entering the grid.

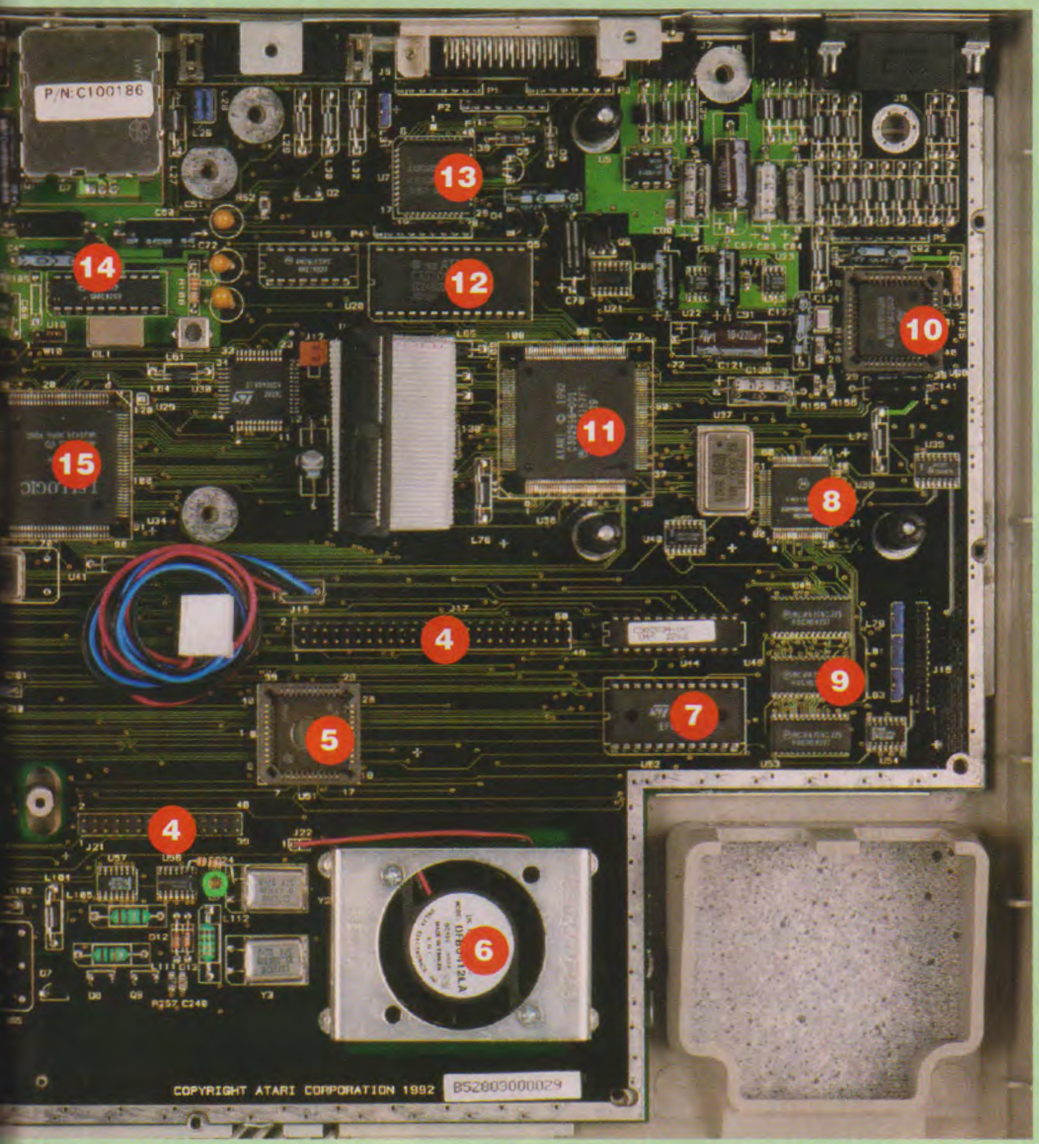
MULTI-TASKING

One point which has caused a great stir is the fact that the Falcon is able to multi-task. Using MultiTOS, an enhanced version of Eric Smith's MinT, the Falcon is able to run more than one program at the same time and allow you to switch between them. How useful this is will depend on what elements of one program can be accessed from another. For instance, a graphics package may be able to run in tandem with a desktop publisher allowing you to edit graphics already placed on a page and immediately see the results.

MultiTOS will not be provided in ROM, but will be disk-loading instead. A sensible move as MultiTOS is one part of the Falcon very likely to cause problems and require 'fine tuning'.

STANDARD PROGRAMS WITH THE FALCON

Atari is including six programs in the box with the Falcon. ***Calappt*** is a personal information manager which incorporates a calendar and appointments screen, import-



TECHNICAL SPECIFICATION

16 MHz, Motorola MC68030 micro-processor
32 MHz Motorola DSP56001 digital signal processor
Internal IDE interface with mounting for a 2.5" IDE drive
External SCSI2 port, which will accept all standard SCSI devices
8 channels of 16-bit digital DMA sound with sampling rates up to 50kHz
Palette of 262,144 colours
Resolution up to 640 x 480 pixels with 65,536 colours on-screen at once
Overscan mode available for 768 x 576 pixels
1.44 Mbyte (HD) internal drive
TOS 4.00 operating system in ROM
MultiTOS, Multi-tasking operating system on disk
Up to 14 Mbyte of RAM
Socket for a 68882 Maths co-processor
Internal expansion slot for second processor.

Rear panel ports:
DSP (26-pin D-type female)
Headphone (3.5 mm stereo phono)
Microphone (3.5 mm stereo phono)
SCSI2 (50-pin female)
Video (19-pin D-type male)
TV Modulator
Parallel Printer (25-pin D-type female)
Serial Modem (9-pin D-type male)
Local Area Network (8-pin mini-DIN female)

Plug-in adapters bend the Falcon's flexibility further. On the left, the adapter to allow you to plug in your any current Atari monitor. On the right, the VGA monitor adapter block.

ing and exporting of text and the ability to print out, while ***Procalc*** is a basic calculator. The Systems Audio Manager consists of a couple of programs (auto program and desk accessory) and allows you to record sounds from a microphone and assign them to various system functions, in a similar way to the Macintosh.

Also included are a couple of games in the form of ***Breakout*** and ***Landmines***. These run in true colour, and to see them on a standard Atari SC1224 colour monitor is most impressive. Finally, there's the Audio Fun Machine which allows you to use the DSP for sound.

SO HOW GOOD IS THE FALCON?

Spending a day with the machine is hardly enough to give a detailed account of what it is capable of, but it certainly gives first impressions. The colour aspect is excellent; using a standard colour Atari monitor in true colour mode, it is practically impossible to see the actual screen pixels as various colour images showed, the spread of colour being that even. Scrolling of images is also impressively smooth.

One German demonstration program showed just how powerful the DSP is. HardChor lets you input any sound via the microphone socket on the rear and then process it in various ways using a recording rate of 12.5, 25 or 50 kHz. The effects included a 10-band stereo Graphic Equaliser and a Delay with controls for delay time, feedback and level. Most impressive, though, was the Harmoniser which allows you to change the pitch of the sound by between an octave down and an octave up. In fact, it allows you to keep the original sound and create two harmonies to go with it! Moving the on-screen faders produces an immediate change in pitch, no matter how fast the movement is.

THE FUTURE

The world is the Falcon's oyster, mainly due to the inclusion of the DSP. Image editing and enhancement, Hard Disk recording without additional hardware (already a reality as the various demonstrations on the Falcon have shown), games with digitised sound and audio, PC and Mac emulators, fax modem and true colour video digitiser are just a taster of the kind of projects currently underway.

ULTIMATE EXPERIENCE

Perhaps the ultimate in multimedia that shows the Falcon off as the amazing system it is has to be the video telephone system where you can see the person you are speaking to in your monitor!

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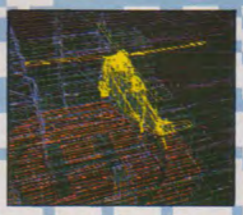

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GET YOURSELF ORGANIS

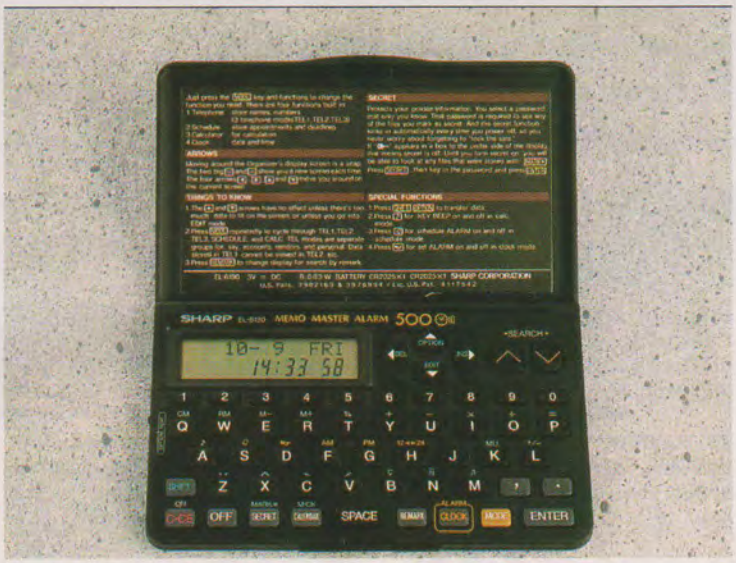
Stocking fillers or useful aids? In this two-part series, Garth Sumpter, Tony Kaye and Heather Turley have been checking out electronic organisers to find out if they're just Filofaxes with batteries or if they really can help you to get organised...

PART ONE

ED!

Not everyone wants to be organised. Having all those pieces of paper crammed into a yuppie Filofax isn't what everyone wants. However, if you take the functions of a Filofax and cram them into a light, compact and stylish cover that you can just slip into a pocket or a handbag, then you suddenly have portable information at your fingertips.

Ranging in price from around a tenner to over £250, electronic organisers can actually be described as mini computers. They can help us to run our lives, store telephone numbers and even keep track of our accounts!



The Sharp EL-6190, one of the more basic organisers.

The larger organisers can be linked to the ST and other computers, so, instead of a yuppie Filofax, the portable electronic age is truly here.

The smaller organisers can be the size of a credit card and hold telephone numbers. Most have clocks and alarms and the further up the range, the more features are available. Most of us could take advantage of the basic functions, but do we need the extras?

Is it worth investing in an organiser? If so, which one?

We've been storing each other's telephone numbers, setting our schedules, keeping tabs on our expense claims and generally using the organisers in our day-to-day lives to see which we would use and which can just be dismissed as electronic toys.

SHARP EL-6190

• £29.99 • 8K

IN BRIEF: This model offers the basic functions of an organiser. As well as the telephone directory, there are clock, alarm, calculator, calendar and schedule functions. It is basically an electronic address book and has a simple two-line display.

The unit is small and neat and can store up to 500 names and numbers, assuming that each entry is six characters for the name and 12 for the number.

The telephone mode is quite simple to operate and it is easy to find a number when you need it. There is a daily alarm and a schedule mode that will help you to remember appointments and meetings, or even dates with friends. For bank PIN numbers and other confidential information, there is a secret area and a user-definable password.

The unit works on two batteries and will last about a year before needing a replacement. A backup battery is installed, enabling you to change over without losing all the data that has already been inputted. However, with all these units, it is always advisable to keep a hard copy of the numbers in case of emergency.

ST REVIEW COMMENT: "This is too complex for the casual user and not enough for the technophile. Good for the price, but there are better."

✪✪✪

SHARP ZQ-5200

£99.99 • 64K

IN BRIEF: With eight times the memory capacity of the EL-6190, this is much more of a serious organiser. It has the same functions and a few more besides.

The display is bigger, providing a full month at a glance in calendar mode. This gives plenty of room for many more functions of the type you'd expect to find in the pages of a Filofax.

A single key press will put you into the selected mode. Extra functions include Memo, World and Home times, Expenses, Paperless Printer/Calculator, Anniversaries and even a To Do list. With the optional computer link cable, you can connect this model (and all of the models above it) to a computer to back up and download data.

The expenses manager is worthy of a mention. If you're anything like me, keeping a track on spending is not always easy. With this utility, you can log an expense against a heading along with a date and description. By calling up a report later on, you can see exactly where your money went – essential if you have to keep a track on spending for business or if you just seem to let it slip through your fingers.

ST REVIEW COMMENT: "The ZQ-5200 is certainly worth considering. An ideal companion with just enough to keep you amused without being too technical. The unit is not too big to carry around and has enough memory for the casual user and small businessman alike."

✪✪✪✪

The ZQ-5200 has most of the functions of the older IQ-7000, but without the expansion card feature.

Top of the range from Sharp, the IQ-8400 complete with card slot and touch-sensitive screen.

SHARP IQ-8400

£259.99 • 256K

IN BRIEF: The top of the Sharp range sees a massive 256K of memory (that's half of the memory in a standard ST!). You're highly unlikely to run out of memory with this one, but if you do you can buy a RAM card and add up to another 256K.

The additional features over the ZQ-5200 include much more detailed scheduling functions, showing weekly and daily views, full indexing for easy finding of data, on-screen help, a business card function giving all of the details for each entry to one view and a card function which allows you to add extra memory or other programs. Cards currently available include dictionaries, games and extra memory. There are specialist cards too, like the ***Holy Bible*** and the ***Encyclopaedia Of Wine***. They range in price from around £30 to £130.

The large screen area gives two months to a view and is clear and functional. The world time includes a representation of the world showing which time zone you are looking at. There are 72 pages of cities to choose from, with a total of 215, some of which I haven't even heard of!

The unit requires five batteries altogether – four run the organiser and one is for memory backup when changing the others. It's quite a relief to see an option to add an external battery pack.

My one real complaint with this organiser is that you can't keep the time display on. When you press the button for home or world time, the display reverts to the previous selection after only a couple of seconds. I would have liked to have the option of leaving the display on for as long as it was required.

ST REVIEW COMMENT: "I like this one, apart from my niggle about the clock. It's easy to use and is ideal for the businessman on the move. An improvement over my IQ-7000, if only for the QWERTY keyboard."

★★★★

CASIO SF R20

£269.95 • 256K - 520K

IN BRIEF: This is Casio's flagship model and has an expensive yet friendly and familiar feel to it. Although festooned with function buttons, including a ***Lotus*** compatible spreadsheet called ***Lucid 3D***, it is surprisingly easy to use.

A positive action QWERTY keyboard makes it easy to enter information, but the single biggest advantage of this organiser must be the very clear, logical and easily read display.

Functions abound on this model. There's a reminder function which will alert you to regular events – either daily, weekly, monthly or yearly and can display a text message of up to 384 characters. There are two telephone/address books: one is a private one that holds name, address and telephone number with extra space to add any of your own comments, and another called business card. This holds all the postal/telephone information for businesses including telephone, fax and telex lines and even has a work title entry.

Any of these headings can be subjected to a sort so you can categorise each of your entries to make subsequent sorts much easier. The number of entries that you can make is only limited by the available memory – and with the use one of the plug-in cards, this can be increased by up to another 256K!

With a range of functions covering world time, home time, calendar, schedule, a weekly page, calculator (which can be converted to high level scientific with the optional card), a 'to do' list and a free file which can be defined by the user, the Casio really can do the business.

ST REVIEW COMMENT: "The Casio SF R20 really is a powerful tool. All the functions that you could possibly require, plus the advantage of the slot-in cards and what is probably the clearest and best quality LCD screen on any of these gadgets make the SF-R20 the king of organisers."

★★★★★

ATARI ST REVIEW
ESSENTIAL BUY

Casio's flagship, the R20. Loads of features and a nice big screen.

ATARI ST REVIEW
ESSENTIAL BUY

The Psion Series 3 organiser has Word and a spreadsheet built in. It also features a complete programming language.

PSION SERIES 3

£249.95 • 256K - 4MEG •

IN BRIEF: Psion has come a long way since its first organiser and the third series benefits from continual development. The Psion comes complete with batteries, two extensive manuals covering use of the machine and the OPL programming language. The grey, sprung case opens to reveal a very plain-looking keyboard. However, as all functions have been taken off the keyboard and placed on a touch-sensitive strip above, the keys are the largest of any of the organisers we looked at - which is particularly useful as it runs the ***Word 5*** word processing package, and consequently makes entering data significantly easier and less prone to errors.

The display is strong and easy to read and whilst not as large as some, contrast is very good – it doesn't seem to suffer the slightly green look of most other displays.

This simple approach to the Psion is refreshing, with the eight function keys quickly taking you to either Data, ***Word 5***, Agenda, Time, World, Calculator or the OPL programming language.

The real trick of this is the fact that you can have various files. For example, with the Data function, you can set up different names and address files to cover business, personal, clubs, family and so on with full control over them in terms of passwords, searches, printing options via the output port.

ST REVIEW COMMENT: "Compact and strong, the Psion has lots in its favour and is certainly ideal for anyone who needs to write on the move. The ***Word 5*** package and database functions are excellent and have space for two plug-in modules."

✪✪✪✪✪

DATABANK DC7500

CASIO • £34.99 •

IN BRIEF: Small but perfectly formed, this organiser looks sophisticated and you certainly feel that you're getting value for money. The one slight snag is the case – it may look good, but it will take you a while to work out how to open it, and the instruction booklet (which is very easy to follow) isn't much help on this point.

There are two telephone directories – one for business and one for personal numbers. You can store a total of 500 numbers, so dividing them in this way makes life much easier. The three-line display enables you to enter names, telephone and fax numbers and see them all at once; it also tells you whether you are in the business or personal directory.

The conversion function works in the same way as on the Data-Cal, while the schedule allows you to keep records of appointments. The biggest problem with this one is that you only have 12 characters in which to sum up the details of your appointment. Programming the schedule follows the same procedure as any other functions; but on our model it didn't appear to save the details!

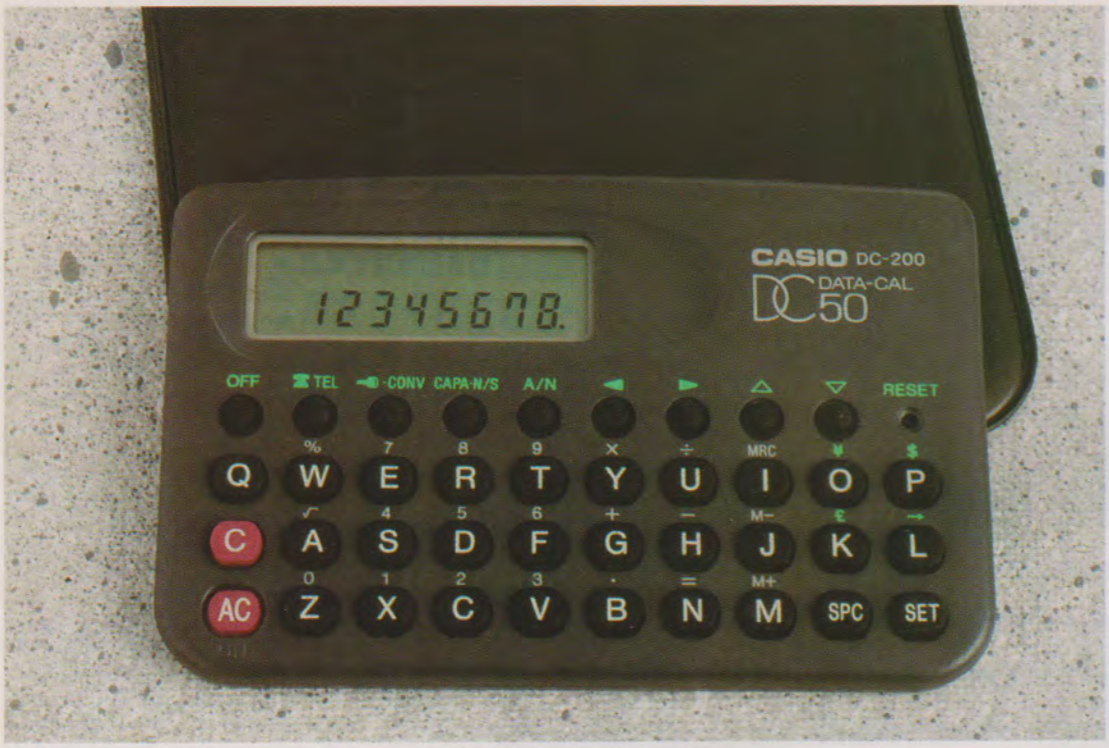
The Databank gives you access to information on time in 29 different time zones. Some of the countries featured are incredibly obscure and you'll need to keep the manual with you to decipher the codes used on the keypad!

The machine features an alarm which is easy to set, but by the time the case is closed and placed in a pocket or briefcase, the chances of actually hearing it are probably pretty remote.

ST REVIEW COMMENT: "A versatile little device that looks slick and doesn't need too much brainpower to get to grips with."

✪✪✪✪

The Casio DC 7500. A value-for-money organiser for the casual user.



The "baby" of the Casio family. An ideal little black book!

CARD SYSTEMS

All top-of-the-range organisers seem to have a ROM/RAM card system. This enables you to add either extra memory or specific programs to your organiser and thereby tailor it to your specific needs.

This effectively turns an electronic organiser into a computer as each Read Only Memory (ROM) card that you insert, runs a program that gives you the particular software that you want.

ROM card applications for organisers are growing more and more sophisticated.

At present you can get language translators, professional spreadsheets, specialist expense account packages and even programming languages on plug in cards.

Among the latest developments are highly specialised cards including medical dictionaries and even games!

DATA-CAL DC-200GY

CASIO • £9.99 •

IN BRIEF: This model looks basic and it is. A neat, wafer-thin device, it will slip easily into your jacket pocket and is so light that you're likely to forget it's there.

The instruction sheet is a huge sheet of low-quality paper. Having said that, though, it does provide you with everything you need to know about the machine and is easy to understand.

Apart from doing your sums, the Data-Cal will store up to 50 telephone numbers. Inputting these is relatively straightforward, the only catch being that the maximum length for a name is eight characters. It may sound fine in theory, but in practice, this proves to be quite restrictive.

Deleting existing telephone numbers is a comparatively complicated manoeuvre for such a simple machine – you can rest assured that there's no danger of this happening by accident!

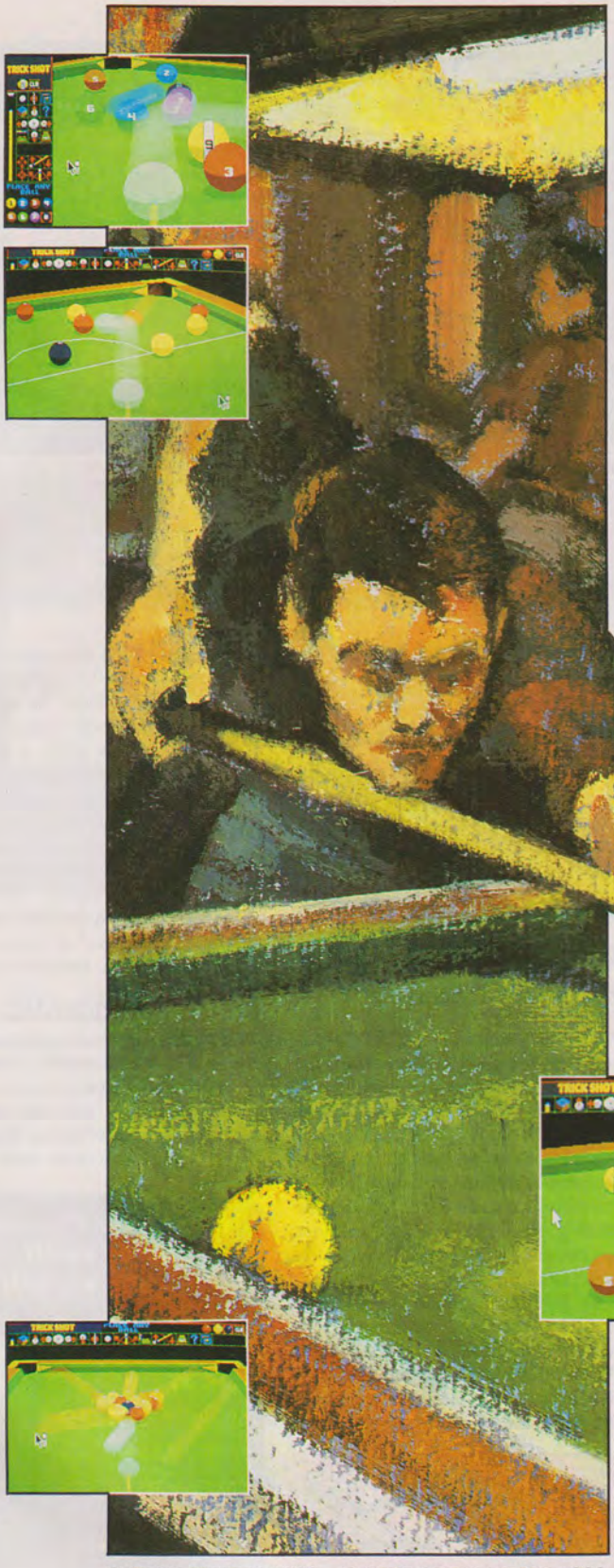
Numbers are searched for in one of two ways – either by a 'find' operation, keying in enough appropriate letters to get a match or by simply scrolling up and down the page.

The conversion function is again straightforward and is capable of converting currencies, weights and measures in both directions. However, for a machine that is mainly used for number crunching, the numbers are extremely difficult to read. They are very small and are light grey against a dark grey background – you need to use it in a good light!

ST REVIEW COMMENT: "A very basic and easy-to-use device with severe limitations."
✪✪

BUYERS GUIDE

	CASIO DATA-CAL DC-200GY	CASIO DATABANK DC-7500	SHARP EL-6190	SHARP ZQ-5200	SHARP IQ-8400	CASIO SF R20	PSION Series 3
PRICE	£9.99	£34.99	£29.99	£99.99	£259.99	£269.95	£249.95
MEMORY	50 items	500 items	500 items	64k	256k (expandable)	256K (expandable)	256K
KEYBOARD	K	K	K	K	K	K	K
FUNCTION KEYS	3	7	5	12	12 (plus touch-pad)	14	8
CALCULATOR	✪	✪	✪	✪	✪	✪	✪
WORLD TIME	—	✪	—	✪	✪	✪	✪
HOME TIME	—	✪	✪	✪	✪	✪	✪
SCHEDULE	—	✪	✪	✪	✪	✪	✪
CALENDAR	—	—	✪	✪	✪	✪	✪
PASSWORD	✪	✪	✪	✪	✪	✪	✪
COMMUNICATIONS	—	—	✪	✪	✪	✪	✪
PHONE DIRECTORY	✪	✪	✪	✪	✪	✪	✪
ADDRESS BOOK	—	—	—	✪	✪	✪	✪
MEMO	—	—	—	✪	✪	✪	✪
BUSINESS CARDS	—	—	—	—	✪	✪	User defined
GAME CARDS	—	—	—	—	✪	✪	—
SPREADSHEETS	—	—	—	—	—	✪	Optional card
WORD PRO	—	—	—	—	—	—	✪



ARCHER MACLEAN'S

done for pool what he did for snooker. Brought it balls, rules, baize and all to the home computer.

Pool features **three sets of rules:** 8-Ball UK Coin-Op, and 8-Ball and 9-Ball US Pro. You can practice or play a single match against a friend or one of **20 computer-controlled opponents.** Or why not involve yourself in a **tournament** as one of eight players?

You can leave the cue and small change at home. Archer Maclean's Pool is all you need.

FROM THE AUTHOR OF JIMMY WHITE'S WHIRLWIND SNOOKER

POOL

© Archer Maclean 1992. © Virgin Games Limited 1992.

FEATURES

- 8-Ball & 9-Ball Play
- Coin-Op & Pro Rules
- 8-Player Tournaments
- Special Trick Shot Table
- 20 True Computer-Controlled Opponents
- Fully Interactive Televisual Display.

Screenshots may be taken from a different version.

Virgin Games 338A Ladbroke Grove London W10 5AH

Virgin GAMES

COPY CATS

Andrew Wright transforms his ST into a PC and Mac in our in-depth look at the whys and wherefores of emulation

There are some pretty impressive programs available for the ST, but did you know that you can run industry standard DOS programs such as the ***Lotus 1-2-3*** spreadsheet on your ST too? Or the top-end Mac DTP package, ***Aldus PageMaker***?

Choosing an emulator can be difficult with all the types on offer. Over the next few pages we'll take a look at all the PC and Mac emulators available for the ST to help you choose the best one for you.

INCREASING YOUR OPTIONS

Why would you buy an ST and then want to emulate another computer? The answer is pretty complex, but basically it boils down to what you want to do. You may be quite happy with your ST for games and word processing but if your hobby is, say astrology, you'll find many more useful programs available for the PC or Mac.

Alternatively, you might use a PC at work and an ST at home and want to transfer data between them or perhaps run the same programs. In this situation, the obvious option is to buy another computer, but the catch here is the expense. It would also take up twice the desk space and having two hard drives and two monitors might well be a waste of resources. Since emulators are currently available for considerably less than a new machine, buying one seems to make sense – if it is what you need.

WEIGHING UP THE ODDS

A word of warning might not go amiss. If you are going to spend most of your time working in emulation mode then an emulator is unlikely to be suitable. If you are doing development work under DOS, for example, you will need a PC. If you intend running major applications such as Windows, the PC's graphical environment, or DTP programs, or even just games, you may be much better off with a real PC too.

Not all DOS programs will run on the PC emulators just as not all Mac ones run on Spectre GCR, the Mac emulator for the ST.

There is no definitive list of applications that will and will not work with each emulator, although it is estimated that at least 95 per cent of mainstream DOS applications will run satisfactorily.

PROBLEM AREAS

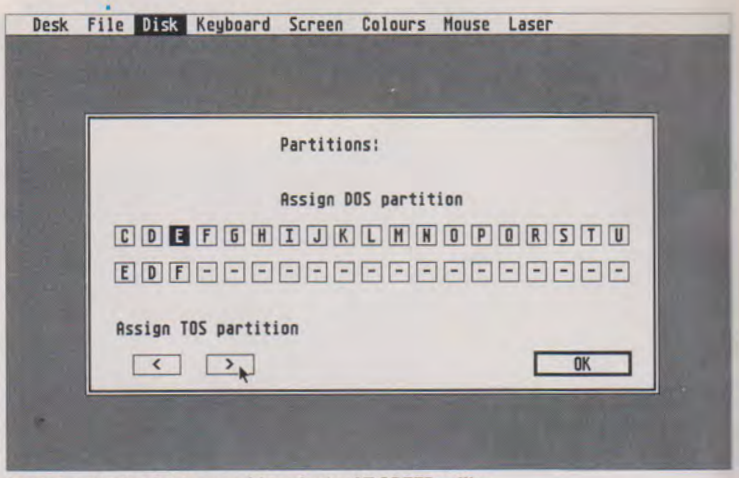
It is possible to give some indication of which programs won't run, however. Firstly, as the emulator uses the ST's hardware, this is the main source of problems. A good example explains why you can't see any screenshots of PC software in action on these pages – most DOS screen grabbing software looks for a video card and when it finds only an SM124 monitor, it gets a little confused.

The Spectre is much better at emulation, running most Mac programs I've tried, simply because it has a head start – both the Mac and the ST share the same basic processor, the 680x0 series.

OLD FAVOURITES

In general the PC software that works best with an emulator is software that was developed a few years ago when the 8088 processor was the basic machine. This type of software doesn't stretch the capabilities of the old PCs too much and hence the emulators cope well.

Try running the newer, bigger Windows 3.1 applications on a 286 PC emulator and you will soon run into trouble, not to mention frustration at the slow speed.



Mapping the hard drive partitions in the AT SPEED utility.

PC/AT SPEED

Compo offers three different PC emulator boards in its PC/AT SPEED series and while all have similar specifications they offer different levels of PC computing

PC SPEED is the entry level emulator and is based on the NEC V30 chip which is more or less identical to the PC XT's 8088 but rather more efficient. PC SPEED has a Norton rating (one of the standard PC processor benchmarks) of 4.0. It will happily run older text-based DOS programs but not the latest version of Windows. You will also need to purchase a copy of DOS.

AT SPEED is based on an Intel 80286 processor running at 8 MHz. It is almost twice as fast as PC SPEED with a Norton rating of 6.7. If you need even more power, AT SPEED C16 is the same board running at twice the clock speed – 16 MHz – and it has a Norton rating of 8.2. DR-DOS 5, which is supplied with both boards, is a good version of DOS if you are running DOS programs but not nearly as good as the latest version, DR-DOS 6.0. Quite a few ST owners would smile if they saw this one – part of DR-DOS 6.0 is a graphical shell called VIEWMAX which in turn is based on good old GEM! And we've been saying how good it is for years!

RUNNING PROGRAMS

Windows runs perfectly well on these AT SPEED boards, although it isn't recommended as it is rather slow. It isn't particularly brilliant on a real PC running at 33 MHz! Again, the older DOS appli-

Good value for money
Good UK support
Manual was written in English
Very stable in use
Bundled with good version of DOS

PROS AND CONS

Fitting can be difficult
Additional adapter needed for STE

"Best buy PC emulator with excellent stability"

NAME: AT SPEED/AT SPEED C16 AT
COMPANY: COMPO SOFTWARE
CONTACT: 0480 891819

PRICE: £149/£229
RELEASE DATE: OUT NOW
MIN MEMORY : 1MB

EASE OF USE	★★★★★
DOCUMENTATION	★★★★½
FEATURES	★★★★½
VALUE FOR MONEY	★★★★★

OVERALL 87%

DO YOU REALLY NEED AN EMULATOR?

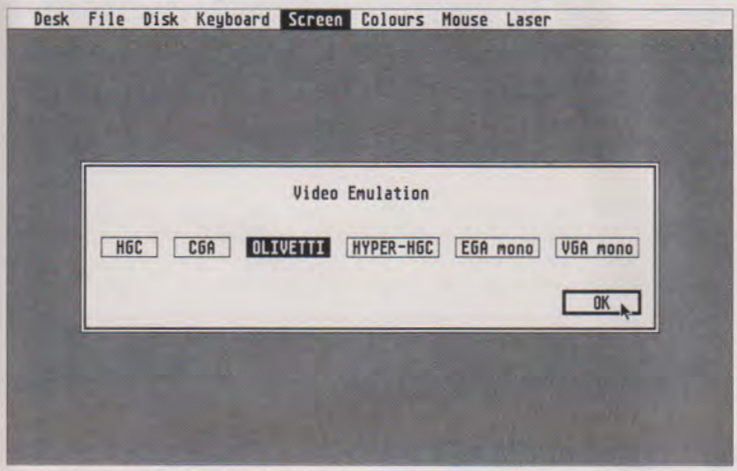
Let's assume that you work for a company that uses PCs. You use them all day for correspondence and basic spreadsheet analysis but you would like to take work home occasionally. Not only that, but it would be nice if you could write letters at home and print them out on the office laser, wouldn't it?

In actual fact, you might not need a PC emulator. Although TOS 1.4 claims to be able to read and write to PC disks, it won't do it reliably. However, there are plenty of formatting utilities that will, and although the best one is ***Fastcopy Pro***, there are PD ones too, and are given away on this month's coverdisk.

A lot of ST software is quite capable of interchanging data with PCs. Take ***Timeworks 2*** for example. You can create newsletters on the ST version and import them straight into the PC version at work. ***Redacteur*** and ***Protext***, the top-end ST word processors, are both capable of saving text files in formats that a PC will understand and vice versa. There are even spreadsheets such as LDW Power 2 that will load and save ***Lotus*** compatible spreadsheet files. If the worst comes to the worst, you can always save your work as ASCII text and transfer it that way.

The Mac is a different kettle of fish as no other computer can read its floppy disks directly. If you use Macs at work and want to bring information home on floppy, you will need Spectre GCR to read the disks.

Whether or not you really need an emulator depends on what you want to do. If you only need to transfer data, the ST is probably capable of doing it on its own. If you want to run real PC or Mac software, then a hardware is the only real option open to you.



Choosing the display.

cations run well - we tested the 8 MHz board with several DOS applications and it worked at an acceptable speed without any problems. Examples include the shareware spreadsheet ***As Easy As***, ***WordPerfect 5*** and ***Microsoft Excel 2.0*** under a runtime version of Windows 2.0x.

REQUIREMENTS

The main requirement is one Megabyte of RAM in order for DOS to access the full 640K of conventional memory (if you want to run Windows, you'll need at least two Megabytes of RAM, and preferably the full four Megabytes. There is also a separate adapter for STE models.

Installation requires some soldering as the SPEED boards have to be fitted on top of the existing 68000 CPU. However, an additional adapter can be supplied for Mega STs to avoid any soldering and a maths co-processor socket is provided. Once the hardware is in place, all that remains is to run the supplied software, configure your ST for PC mode and then switch from the TOS environment to DOS. This can be done via an accessory or by double-clicking on the appropriate program.

REMAPPING PARTITIONS

If you have a hard disk, existing TOS partitions can be remapped to DOS ones. For example, your ST's C partition could be mapped to DOS drive D and the D partition to DOS drive C, allowing you to autoboot DOS from the hard drive. Other options such as the choice of screen display can be selected quickly and easily.

PERIPHERAL FUNCTIONS

The Compo SPEED boards all use the ST's various peripheral functions, including the video display, floppy and hard disk drives and, of course, the available memory. The Atari mouse is recognised by the SPEED boards as being a Microsoft serial mouse, hence no separate mouse drivers are required (a PC user has to load a small program just to make the mouse work!).

A monochrome monitor is recommended as this offers the widest range of screen resolutions and modes (there are dozens of different PC display modes, just to confuse users utterly). With a mono monitor, PC and AT SPEED can run in CGA mono (640 by 200), Hercules (720 by 350) and Olivetti (640 by 400). AT SPEED can also emulate EGA (640 by 350) and VGA (640 by 480) in monochrome. The only option with a colour system is to use colour CGA, a very low resolution of 320 by 200 pixels. The best option is undoubtedly Olivetti mode as this matches the Atari SM124/5 monitor's resolution and requires no awkward scrolling to view the whole screen. ST owners with ***Overscan*** fitted will be able to see the full width of the Hercules display.

If all you need is to run older PC programs occasionally, for fun or perhaps as part of an Open University course, or even because you are more familiar with word processors such as ***Wordstar*** or ***Locoscript*** than ***First Word Plus***, then a PC or AT SPEED emulator might well be for you.

"Stable but too slow to run most modern software"

NAME: PC SPEED XT EMULATOR
COMPANY: COMPO SOFTWARE
CONTACT: 0480 891819

PRICE: £99
RELEASE DATE: OUT NOW
MIN MEMORY : 1MB

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
FEATURES	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL 65%

Stable
Cheap

PROS AND CONS

Won't run Windows 3.1
Too slow for modern applications
No DOS bundled

WHAT IS A PC?

Good question! The term PC actually stands for "Personal Computer" but it now covers a broad range of machines loosely based on the same architecture. The term PC was coined by IBM in 1981 when it launched the original IBM PC.

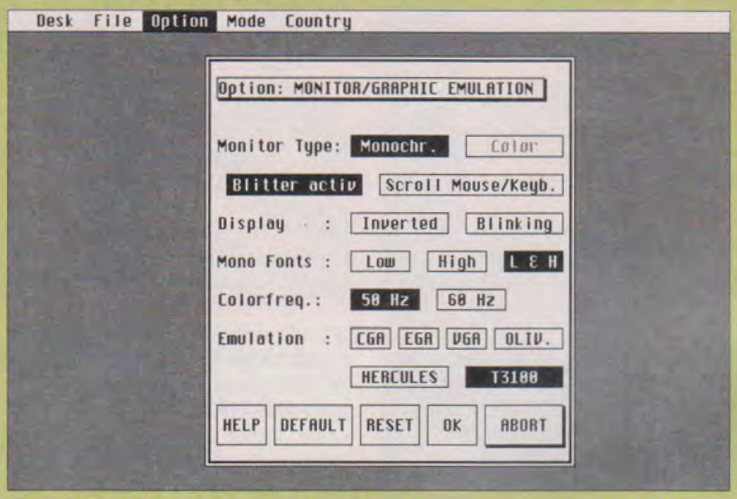
The early IBM PCs were based on Intel 8088 processors and had 256K RAM and 5.25 floppy inch disk drives. They later developed into the PC XT range which had 640K RAM and used hard disks. They can still be bought today but their lack of power means that they can no longer run state-of-the-art applications (or Windows) and they tend to be used mostly as word processors.

The next generation of PCs, the AT series, was based on the 16-bit Intel 80286 processor, roughly equivalent to the ST's Motorola 68000. While this chip is much more powerful than the original 8088s, even Intel has admitted it was 'brain damaged'. It has now been superseded by the 32-bit 80386 and 80486 models which can address more memory and are capable of multitasking different programs. They are broadly similar in performance terms to the 68030 processors used in the Atari TT and Falcon.

The link between all these types of PC is the operating system. PCs use a primitive disk-based operating system called DOS which requires the user to type in single word commands to carry out tasks such as copying files or creating folders. A separate graphical user interface can be loaded on top of DOS (again from disk), the most popular of which is ***Microsoft Windows***. This provides icons on the desktop and multiple windows similar to those in the ST's GEM operating system.

VORTEX AT ONCE

The Vortex 386SX emulator is the most powerful PC emulator that you can currently buy



Installation - setting up the screen display.

Useful multitasking capability
Good for running multiple Windows applications
Potential for upgrading speed by adding fast RAM
Reasonably comprehensive manual

PROS AND CONS

Unstable on some STs
Hard drives awkward to set up
Overpriced when compared with a PC
Very little UK support

While the 286 is a 16-bit chip, the 386 is a 32 bit processor which is capable of executing several instructions simultaneously and carrying out true multitasking. The AT Once 386SX runs at only 16 MHz, however, making it the slowest chip in the 386 family and one which is already redundant in the PC world. It isn't much faster than the 16 MHz AT SPEED C16 (it has a Norton rating of 8.4) although it is more efficient, especially when running a multitasking operating system such as Windows.

There are sockets on the emulator board for a maths co-processor and four Vortex fast RAM chips providing 512K of high speed memory. This increases the Norton rating to 15.4 and makes it perform very well with both Windows and DOS applications.

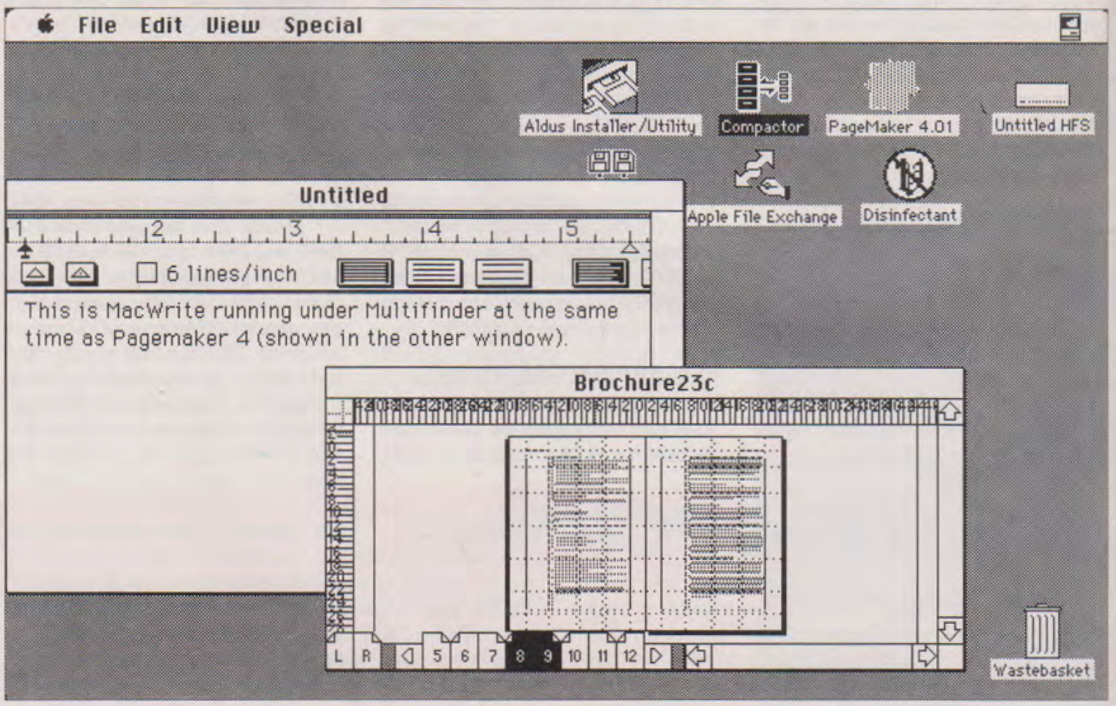
Installation of the Vortex is dead simple or pretty awkward, depending on your hardware. The first versions of the emulator were designed for the Mega STE and if you have one of these it plugs straight into the expansion slot. For Mega ST and STE owners a special adapter is available to avoid any soldering but STFM

SPECTRE GCR

This is the only Mac emulator for the ST, but it's so good that any competition would have a hard time

Essentially the Spectre GCR is a plug-in cartridge that fits into the ST's cartridge port. This means that it can easily be fitted or removed in seconds. The cartridge contains two genuine Apple Macintosh ROM chips and a thick cable runs from the cartridge to the ST's floppy disk drive port. All you will need to get hold of is a disk or two containing the rest of the Mac's operating system - called System - which should be available from a local Apple dealer.

Spectre GCR emulates the older Mac Plus model which, although discontinued, is still in widespread use. It can read and write disks formatted on a Mac, including the double-sided HFS format, although it doesn't recognise high density disk drives. A hybrid format is also available called Spectre format - this lets you swap data with TOS applications using a special ST program called Transverter that reads Spectre disks.



Spectre running programs in separate windows under Multifinder.

LIGHT READING

You will need one Megabyte of memory and a monochrome monitor but more memory is recommended. Two manuals are supplied, one being the original version and the other an update. The manuals are written in a quirky style that is no help at all when troubleshooting but it does make good light reading.

With the cartridge and cable properly installed, the only thing that remains is to run the Spectre program. This is a normal ST program which presents you with a GEM menu bar and various options. You can allocate one or more hard drive partitions to Spectre, for example, and tell it whether to load the System from floppy or hard disk. Everything is supported in Mac mode, including hard drives (partitions have to be allocated to Spectre) and sound. Once done, press return and the Spectre menu dissolves away and is slowly replaced by the Macintosh welcome screen.

This is the point where you find out whether your floppy drive comes up to scratch. The ST's disk drives are built to take ST format disks and the Apple Mac uses a totally different disk format where even the speed of rotation

owners will need to get the toolbox out and heat up the old soldering iron.

INSTRUCTIONS

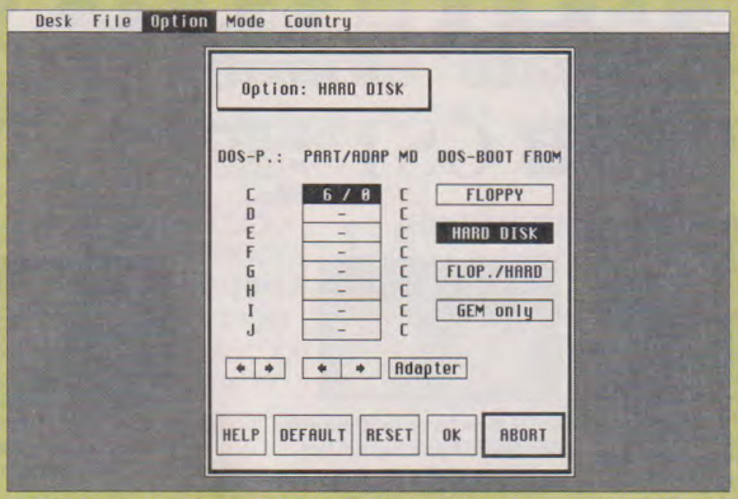
The manual covers most of the options with clear diagrams and instructions. The emulator can be fitted to a 520 ST but it isn't recommended. The main reason for getting a 386Sx emulator will be to run Windows programs and at least 2 MB of ST RAM are needed.

The Vortex offers the same video display modes as the AT SPEED emulators – including EGA and VGA monochrome (recommended for Windows), CGA, Hercules and Olivetti. Colour monitor owners will only have access to CGA, although Windows will still run in this mode.

The emulator also supports high density 1.44 MB drives (this is vital as most Windows programs come on several HD disks) and can share TOS partitions on a hard drive. The Atari mouse becomes a Microsoft serial mouse as far as DOS is concerned and no separate drivers are required.

A clever accessory is supplied on disk, along with the installation routine (an ST program) to set display and memory modes and hard disk mapping. The accessory, ***Hyperswitch***, lets you multitask between TOS and DOS applications as well as setting up 'virtual STs' that can each run DOS programs under emulation. Although not a multitasking system, it can be useful.

Setting up hard drives isn't easy and the rather poor German translation in the manual doesn't help. There are also some problems with stability on some Mega STs – mine, for example, used to hang up frequently until several components were changed. To be fair, the manual covers this point, blaming the low quality Atari components, but you could find yourself spending a lot of time and effort getting the emulator running reliably.



Mapping the hard disk partitions between TOS and DOS.

> **"Somewhat overpriced but ideal for multitasking"**
>
> **NAME:** VORTEX 386SX
> **COMPANY:** SILICA SYSTEMS
> **CONTACT:** 081 309 1111
>
> **PRICE:** £299
> **RELEASE DATE:** OUT NOW
> **MIN MEMORY :** 1MB
>
> EASE OF USE ✪✪✪✪✪
> DOCUMENTATION ✪✪✪✪✪
> FEATURES ✪✪✪✪✪
> VALUE FOR MONEY ✪✪✪✪✪
>
> **OVERALL 74%**

Puts loads of good-quality Mac software in reach
Runs faster and has a bigger screen than a Mac
Lets you swap text and pictures with other Macs
Good chance of crash recovery

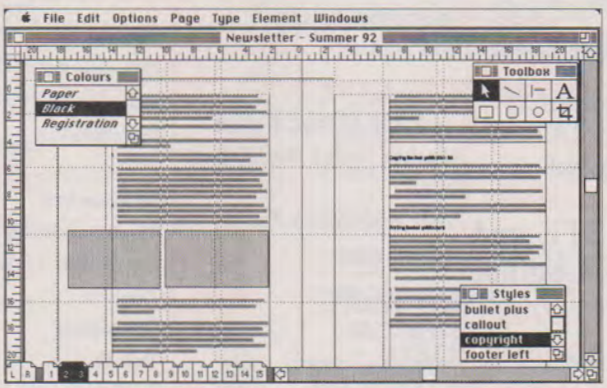
PROS AND CONS

Some ST disk drives may prove incompatible

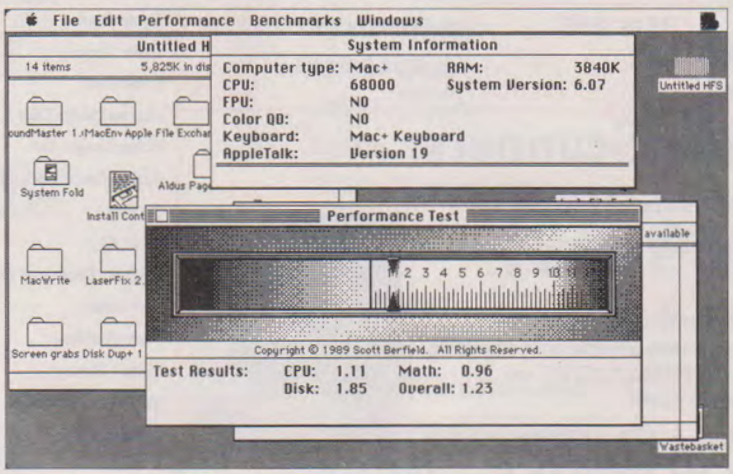
is variable. Spectre puts quite a strain on the disk drive and only better quality ones can stand it. Epson drives are best, with Sony close behind. NEC drives are doomed without special shielding. Once you have successfully read the System disk, however, you can place the Mac System on your hard drive and never worry about it again.

BETTER THAN THE REAL THING

In Mac mode the ST's operating system disappears, leaving all your memory available for Mac applications. Many things are a lot better than on a real Mac. The Mac Plus's tiny screen measures a pitiful 512 by 342 pixels whereas the ST's monochrome screen displays 640 by 400 pixels, giving nearly 50 per cent more pixels.



Premier DTP package Aldus PageMaker running under Spectre emulation.



Spectre even runs faster than a standard Mac Plus!

Some of the keys are slightly different as the true Mac keyboard is rather different to the ST's, but they can be altered if needed.

The ST's board design is more efficient than the Mac's and Spectre runs about 20 per cent faster than a Mac Plus. The Spectre manual lists hundreds of Mac software applications that will work with Spectre. ***Aldus PageMaker***, ***Microsoft Word***, ***MacWrite***, ***MacDraw***, ***MacProject***, ***Cricket Draw***, ***Microsoft Works***, ***Adobe Illustrator*** and ***Aldus Persuasion*** all run and I've tried out numerous public domain programs downloaded from online networks.

The Mac has a similar environment to the ST's GEM, plus the better features of ***NeoDesk*** and TOS 2.06. Software is expensive but a large number of PD programs are available and you can always work in conjunction with your ST. For example, you can save work as a PostScript file and transfer it across to the GEM environment for printing to any printer via CompoScript – it's a lot cheaper than a PostScript laser!

> **"Miles better than the Mac Plus it emulates"**
>
> **NAME:** SPECTRE GCR
> **COMPANY:** HCS
> **CONTACT:** 081 777 0751
>
> **PRICE:** £300 (INC ROMS)
> **RELEASE DATE:** OUT NOW
> **MIN MEMORY :** 1MB
>
> EASE OF USE ✪✪✪✪✪
> DOCUMENTATION ✪✪✪✪✪
> EFFECTIVENESS ✪✪✪✪✪
> VALUE FOR MONEY ✪✪✪✪✪
>
> **OVERALL 88%**

GASTEINER

PhiHong Seagate Quantum™

Steinberg C-LAB GST LIGHTHOUSE

Unit 2
Millmead Business Centre
Millmead Road
London N17 9QU
Tel: 081 365 1151
Fax: 081 885 1953

Optical Mouse

St Format 81%
Cu Amiga 79%

Superb 300dpi Optical Mouse with effortless micro switch buttons.Fast smooth and reliable. Includes Optical Mouse Pad and Holder

£26.00

Optical Pen Mouse

A stylish Pen mouse with quality construction and smooth fast movement. Micro switch buttons. Ideal for DTPartwork,etc. Includes Optical Pad

£35.95

Trackballs

GOLD AWARD WINNER IN ST FORMAT 92%

Stylish three button trackballs,with third button supporting auto fire and click and hold

£29.95

With duel colour Crystal Ball

£34.95

Mega Mouse

GOLD AWARD WINNER IN AMIGA FORMAT 90%

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TOS 2.06

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COMPUTERS

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limited quantity available

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Prices include official Atari Mega STE Kit, Atari Host-Adpt and Software

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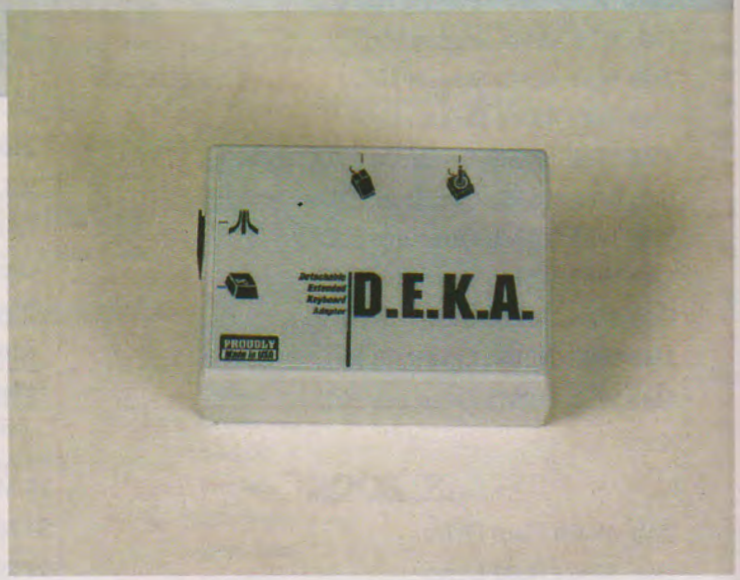
Here's music to the ears of anyone who's had enough of the ST's less-than-perfect keyboard

ADD ONS ADD ONS

CHANGE OF

FITTING A LUXURY KEYBOARD IS EASY



Good quality PC keyboards are now available at low cost in various designs. This one is a BTC AT keyboard, although the DEKA supports XT style keyboards as well. Prices range between £20 and £35 – contact HCS for more information.

Access to a wide range of low-cost keyboards
Easy installation
Detachable keyboard

PROS AND CONS

A little expensive

"An easy-to-install device that gives access to a bargain-rich market"

NAME: DEKA
COMPANY: HCS
CONTACT: 081 777 0751

PRICE: £55
RELEASE DATE: OUT NOW

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL 85%

The most common cause for complaint amongst ST owners is probably the keyboard. There is no question that it leaves a lot to be desired and an increasing number of products are now available to rectify this. The DEKA keyboard interface from HCS enables you to plug a standard PC keyboard into your computer, giving you access to a wide range of low-cost, quality keyboards.

The DEKA (Detachable Extended Keyboard Adaptor) kit includes the interface and several connectors. The interface itself is housed in a grey box which measures approximately 11x8x4 cm and weighs 150g. It sports four sockets – one to connect to your ST, another to connect to the PC keyboard and two for the mouse and joystick. A short installation manual is also included, covering all ST models and PC keyboard types (XT and AT).

INSTALLATION

The Mega ST and Mega STE only require a simple connection between the DEKA and the keyboard socket using the provided connector. If you own an ST(FM) or an STE you will need to open your computer and unplug the existing keyboard. This is a simple procedure and does not require disassembling the computer as with a memory upgrade or a TOS update. Once the keyboard is disconnected you simply plug in the provided connector. The most difficult part of the installation requires cutting a hole measuring 3x1 cm where the new keyboard socket goes. No soldering or prior knowledge of electronics is needed. The manual includes an illustration of a 520 ST showing where the socket is meant to go. However, this is confusing because the illustration is of an old-style ST which does not have a built in floppy drive.

Installation from this point is the same as with a Mega ST(E) – you simply need to plug the provided connector into the newly installed socket, connect its other end to the DEKA interface and then plug in the PC keyboard and the mouse to the DEKA.

Since not all PC keyboards are the same, you can configure the DEKA to work with any keyboard via three pairs of pins and jumpers inside the case. Again, this is a straightforward procedure and a list of popular keyboards and the corresponding configurations is provided. Additionally, it is possible to partially reconnect the original keyboard so that the keyboard and floppy light will still function.

TEETHING PROBLEMS

Curiously, my hard disk refused to work correctly when the DEKA was installed, but it didn't take long to cure the problem. Many hard disk users will have come across this – on some STs the video shifter goes out of sync with the screen when the hard disk is accessed, the display is then lost and you have to reset the comput-

KEY

er. This is a design flaw in the ST but not a severe one. In most cases all you need to do is to get a hard disk connector with a shorter lead. When I confronted HCS with the problem they suggested that I connect a small resistor between pins four and seven on the DEKA connector. This may seem difficult to some of you, but in fact even here no soldering is needed. This seemed to solve the problem and the DEKA and my hard drive were working together.

IN USE

Most PC keyboards are superior to the one provided with the ST – if you do a lot of typing the difference is immediately obvious. PC keyboards don't use the same mechanism as the ST and this results in a positive click when you press a key.

PC keyboards have additional keys such as Page Up and Page Down while the Help and Undo keys are missing. The DEKA employs keyboard re-mapping so that the Help and Undo keys are re-mapped to function keys 11 and 12.

The other extra keys have no function although you can use the double Alternate and Control keys. If you are used to a PC keyboard at work or at school you will feel very much at home. The mouse and joystick function as before as long as you set the jumpers correctly. One configuration in particular caused very strange effects when I moved the mouse around.

CONCLUSION

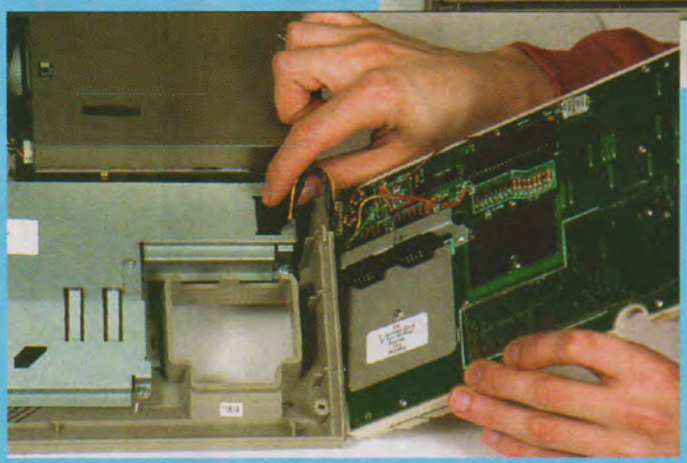
If you think that your ST keyboard is a little flimsy and find yourself double-checking the screen to see if what you type has actually been registered, you should definitely give the DEKA interface a try. Good quality PC keyboards are abundant and relatively cheap and are certainly an improvement on the ST keyboard.

The keyboard is light-weight and since the mouse is not connected directly to the keyboard you can move the keyboard around and even sit it on your lap while you type away. Even if you own a Mega ST(E) you should still try a PC keyboard – the popularity of the PC meant that many low-cost keyboards are now available. This is in contrast to the ST market where replacement keyboards are virtually non-existent. The DEKA is a simple and effective device that gives the ST user access to this bargain-rich market.

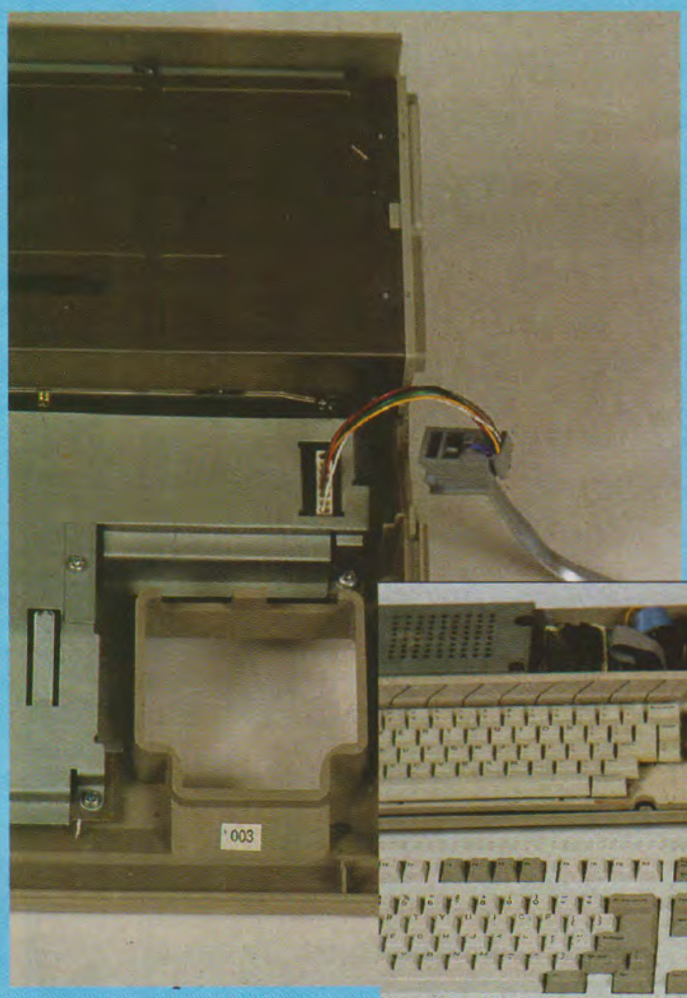
STEP BY STEP

Installation of the DEKA on a standard ST or STE is simple

1 ***First you should unscrew the plastic casing of your ST and remove it. It is not, however, necessary to remove the metal shielding.***



2 ***Next the keyboard should be disconnected and then removed.***



3 ***A connector is supplied with the DEKA and this should be plugged in instead of the keyboard. At the other end of the connector is a small plastic socket which should be fitted next to the disk drive. A small hole must be cut in the plastic casing for that purpose into which you fit the socket.***

4 ***The DEKA is then connected to the socket with the supplied cable and the PC keyboard and mouse can then be plugged into the DEKA. Once this is in place you can replace the keyboard and plastic cover.***

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Mega STE
Falcon 030

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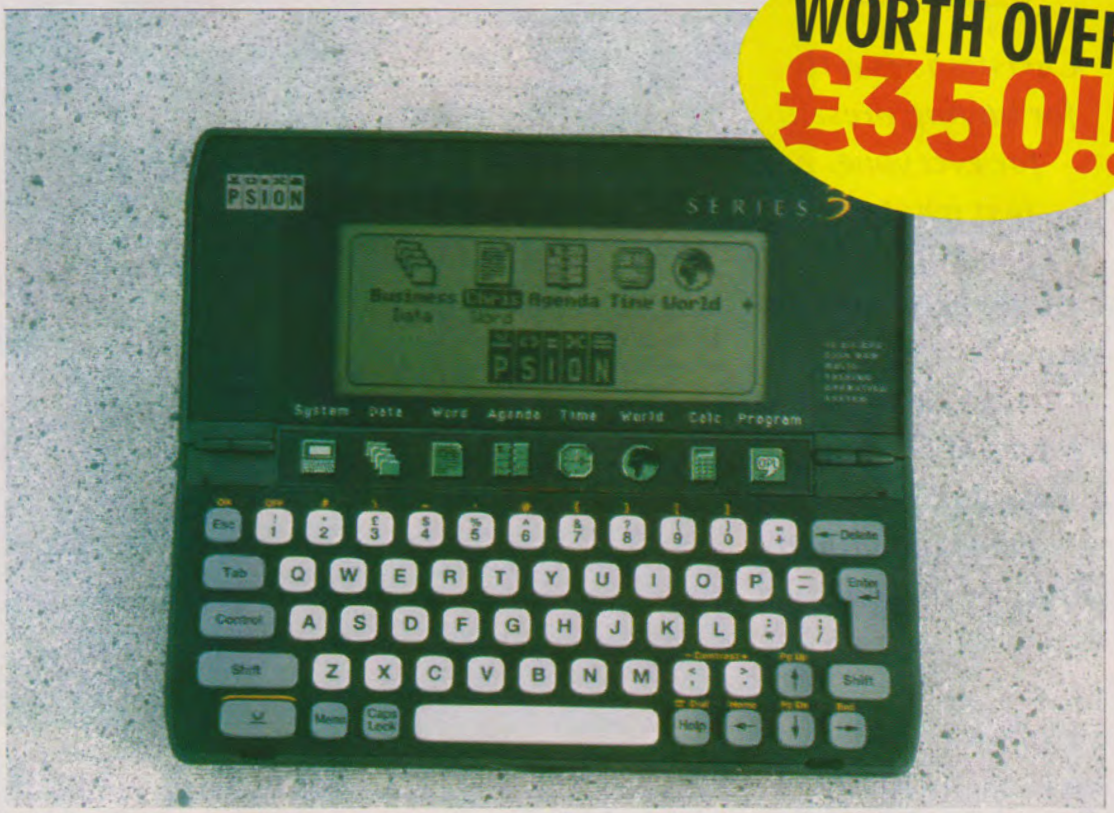

They're small yet perfectly formed and they can transform your life into one of organisational bliss – and you can win one for free!

The Psion Series 3 is the latest and greatest organiser to be released into an electronic gadget world and one could be yours for free along with two plug-in modules that run chess and a spreadsheet which alone are worth almost £120

This amazing organiser come pocket computer, could be yours. All you have to do is to phone the competition hot-line number printed below and answer a few questions about the Psion Series 3. It might help if you have this copy of ST Review opened to page 36.

THE PSION SERIES 3

256K RAM - expandable to 2 Megs
Full programming language
Agenda
World time
Word 5 Word Processor
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Spreadsheet

RULES: This competition is only open to residents of mainland UK and no entries will be accepted from employees of EMAP Images or Psion UK. The editor's decision is final and no correspondence will be entered into. Entry into the competition signifies acceptance of these rules.
Calls are charged at 48p per minute peak rate and 36p at all other times.

THE ST REVIEW COMPETITION HOTLINE

0839 500813

CHRISTMAS CRACKERS

Christmas is a time for buying presents for everyone. But just what are the good buys that'll really help your ST sing? Garth Sumpter treks through the pages of ST Review Past and Present to come up with his choice of presents for an ST...

They'll all be complaining again this Chistmas, the government, the retailers and the punters – all complaining, (rightly enough) about the state of the recession. And they'll be right although hopefully, some people will find that little bit of extra cash and look to buying themsleves something special for actually making it through yet another year of financial doom and gloom.

BITS AND BOBS

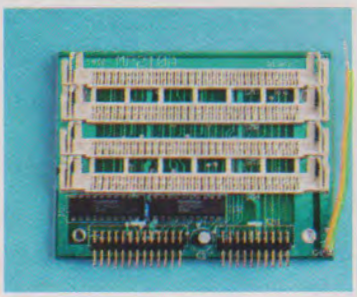
And so, knowing that the economy isn't that bright at the moment, I've looked at just a few ST bits and bobs that I would consider essential purchases for anyone who has an Atari that they want to do more than play the odd game on.

And the good news for everyone who might be taking a sharp intake of breath out there is that prices range from under £10 to lots, so there should be something for everyone's pocket.

MEMORY UPGRADES

If you have a 520STFM or 520STE there really is no better present that you can buy for your ST than a memory upgrade. And whilst I may sound a little like Ebenezer Scrooge, I don't know of anywhere South of Santa's grotto that either offers cheaper or better quality than our own offer on page 58. An inexpensive, yet greatly appreciated present for anyone.

• £9.99 or £34.99 • Go Direct • 0733 63999



THE SKY'S THE LIMIT

Although you won't find the Falcon in the shops this Christmas, it's certainly something worth hanging onto your gift vouchers for. Expected in the shops in early '93 in the guise of 4 Meg of memory backed up by a 64Mb internal hard drive version, the Falcon looks a bit pricey at £899. However, prices are expected to fall more in line once the machine goes into full production later in the year. I'll certainly be getting one, but how many of you will be putting your order in for it this Christmas?

• Falcon 030 • £899/£499 • Atari 0753 533344 •

HARD DRIVIN'

The single, most useful item that you'll ever buy for your ST just has to be a hard drive. The advantages are just too numerous to mention, save to say that once you've had one, you'll never be without one. Apart from being able to install oodles of accessories and have them boot up immediately upon turning on the machine, they also offer fast disk accessing and rid you of the hassle of disk swapping. If you want to get serious get a hard drive. And if you want a good one, then Protar's 50DC drive is one that I would certainly recommend. It's not too expensive, extremely reliable and extremely quiet.

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Star are one of the best known printer manufacturers in the business and their good, solid image has been built on a good reputation. The Star LC-20 has superseded the highly poplar LC-10 and sports improved features including three NLQ typefaces and a quiet function. A real star buy for anyone as a budget printer.

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GUARANTEED VALUE!

It may seem a little trite that I should recommend the magazine that we all work on, but I know what you'll be getting over the next few months. We've got some big surprises coming up on the cover disks (packages like the amazing Timeworks and the current trilogy of professional art and animation contained within the Cyber Series).

Add to that all the latest news, the most informed technical section of ANY ST magazine, the best in MIDI, informative and easy to follow tutorials and a dedications and committment to ST owners that is exemplified by the fact that our reader offers are run as a services – not as profit making ventures. But then, you know all of this anyway – don't you?

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LOOKING TO THE FUTURE

The floptical disk drive is the latest data storage device to arrive on the scene after much speculation about its price and speed. Ofir Gal takes a look. . .

When Atari launched the ST back in 1985 it was shipped with a separate single-sided floppy drive and 512 Kilobytes of RAM. This was seen as more than enough for even the most serious of users, since most home computers had 128 Kilobytes or less and some didn't support disk storage at all. As programs grew bigger, packages had to be split over two or more disks and this resulted in Atari changing over to a double-sided drive for the ST. Even this proved to be insufficient and the new Falcon will come with a high-density drive, capable of storing 1.44 Megabytes on a single floppy, which is built in as standard. Technology, however, still marches on and the latest offering is the floptical drive, capable of storing over 20MB of data on a single floppy – the equivalent of 28 double-sided floppies!

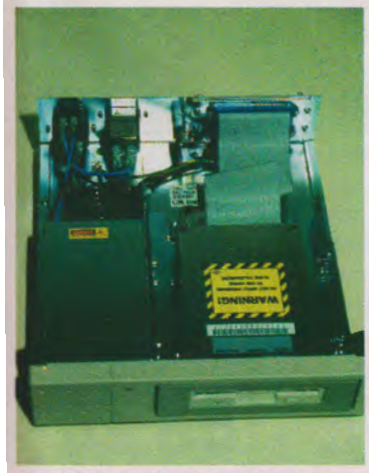
The floptical is housed in a professional looking grey case. A high-quality power supply and heat-controlled fan are included as standard. ST users will require the optional ICD Link.

THE TECHNOLOGY

The floptical drive and disks look very much like their standard floppy equivalents. The drive works by using technology similar to the tracking systems used in CD players. A light-emitting diode (LED) shines a beam of light onto the surface of the disk where 900 microscopic guide tracks are found. An optical system then views the tracks to determine the position, and the read/write head is then guided to the required position. The use of the optical guiding system over the standard magnetic one gives improved access time and data transfer – around four times faster than a standard floppy disk. This system promises greater reliability, but this remains to be proven.

The floptical is a SCSI device and behaves just like a hard disk, requiring a DMA host adaptor to work with an ST. If you own a TT or a Falcon you don't need the host adaptor. The disks must be formatted before use – the same as with a hard disk, but the floptical can't be partitioned into smaller memory segments. When a disk is full you insert another one and carry on. The floptical drive can also read and write to standard double-density and high-density disks.

The Insite Floptical is available from System Solutions. The package consists of a cased floptical mechanism with a power supply and a fan to keep things cool. Since the floptical is a SCSI device, an ICD Link and the excellent ICD software are included.



The floptical looks much like any old floppy drive, but internally it's very different indeed. . .

FORMATTING

As with a floppy disk, a floptical disk must be formatted before use. Formatting is rather slow at almost 20 minutes - this works out at one Megabyte a minute, roughly the same as a floppy. Reading and writing, however, are at least four times faster than a floppy.

Even standard floppies are read a little quicker with the floptical. Operation is the same as with a hard disk. Tests done with Rate HD and Quick Index show a marked improvement in access time and data transfer rate measures at 100 Kilobytes per second, not as fast as a hard disk but much better than a floppy.

IMPROVEMENT

The floptical drive is without doubt a great improvement over the standard floppy. Its 20 Megabytes of storage capacity mean that you can wave goodbye to piles of floppies all over the place and make the floptical an attractive backup media for hard disks. Using a good backup program an 80MB hard disk can be backed up onto three floptical disks with hardly any disk swapping. The ability to use double and high density disks as well is an added bonus.

Much better and faster than a floppy drive, compatible with standard floppies
Excellent backup medium
Cheap media

PROS AND CONS

A little expensive

"A leap forward – at last you can wave goodbye to those piles of floppies"

NAME: INSITE FLOPTICAL
COMPANY: SYSTEM SOLUTIONS
CONTACT: 081 693 3355

PRICE: £399 without ICD Link £459.95 with ICD Link and software £23.00 per diskette
RELEASE DATE: OUT NOW
MIN MEMORY : N/A

EASE OF USE	★★★★★
DOCUMENTATION	★★★★☆
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★☆

OVERALL 90%

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ON-LINE LETTERS

Ofir Gal looks at the latest alternative to conventional fax machines

Fax modems are becoming more popular, offering computer users a cost-effective alternative to dedicated fax machines. While a fax is currently limited to a speed of 9600 bits per second, the speed of the modem varies between models. The latest arrival is the System Solutions package, the TKR Fax Modem, which includes a high speed fax/modem and Tele Office – a program capable of generating, transmitting and receiving faxes on your ST.

THE HARDWARE

The modem is supplied with an RS232 lead, a telephone connector and a power supply and the included manual provides all Hayes standard commands and a full listing of setup registers. It sports non-volatile-memory (NVM), which means that you can set the modem to your requirements and save the setup to NVM. This isn't erased when the modem is switched off and can contain two user defined configurations and three phone numbers. The front panel sports 11 LEDs which indicate send, receive and transmission speed.

The modem operates at various speeds ranging between 1200 to 14,400 bps and supports MNP level 5. It also supports V.42bis, V42, V32bis, V.32, V.22bis, V.22, V.21 and V.23.

THE SOFTWARE

Tele Office is a fully-featured fax send and receive program. It enables you to create a fax by loading text and graphics into the fax layout window, where they can be freely positioned with the mouse.

Two buttons enable you to load your favourite text editor and art programs without having to quit ***Tele Office***. It can be installed as a desk accessory, so you can load another program and still create, send and receive faxes.

Tele Office is actually two programs. The main program is used to create, view and print faxes and enables you to create a telephone book. Creating a fax is quite simple. When a fax is complete it is placed in the schedule. You are then given the option to send the fax immediately or to specify a different time and day for transmission, allowing you to take advantage of off-peak telephone rates.

TeleFax Driver is a small desk accessory which takes care of incoming faxes as well as looking for scheduled faxes. When the accessory finds a fax waiting to be sent it pops up its dialogue box, dials and sends the fax. You can disable send and/or receive temporarily if you don't want to be interrupted while using another program. If automatic receive is disabled and the modem detects a ring, a dialogue box appears, enabling you to choose whether to receive the fax.

To view or print a fax you must have the main program loaded, either as a program or an accessory. Several viewing options are available. You can darken or lighten the image or reduce its size to fit the screen.

A unique feature is the ability to send faxes directly from a word processor or DTP program. Several programs like ***First Word Plus*** and ***Calamus*** are supported and there's a toolkit that allows you to create drivers for other programs. With most programs a fax is sent by printing the document. If the included send-receive accessory is installed it will automatically send the fax.

The program is easy to use, but the lack of English documentation means that some experimentation is required to get the most out of it. It is very flexible when it comes to creating a document allowing you to paste images and text to any position. ***Tele Office*** is a comprehensive program with many features to explore.

The TKR Fax Modem has non-volatile memory and can operate at various speeds.

Extensive fax layout features
Can run as an accessory
High-speed modem with MNP5

PROS AND CONS

A little slow
No manual for program yet

"A flexible and fast device let down by poor documentation"

NAME: TKR FAX MODEM
COMPANY: SYSTEM SOLUTIONS
CONTACT: 081 693 3355

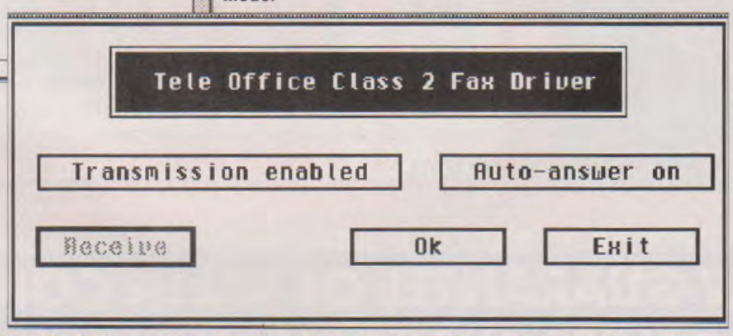
PRICE: £329.99
RELEASE DATE: OUT NOW
MIN MEMORY : 1MB

EASE OF USE	★★★☆☆
DOCUMENTATION	★☆☆☆☆
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★☆

OVERALL **85%**

You can use the fax view window to view your own faxes as well as faxes you receive. A fax can also be printed from this mode.

The fax layout window lets you load text and image files and position them with the mouse.



The Fax Driver accessory is all that you need to send prepared faxes and receive incoming ones. The driver can be set to automatically transmit pending faxes as well as receive faxes and save them to disk.

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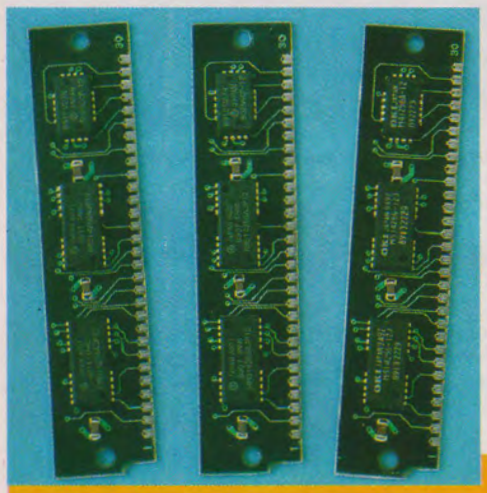

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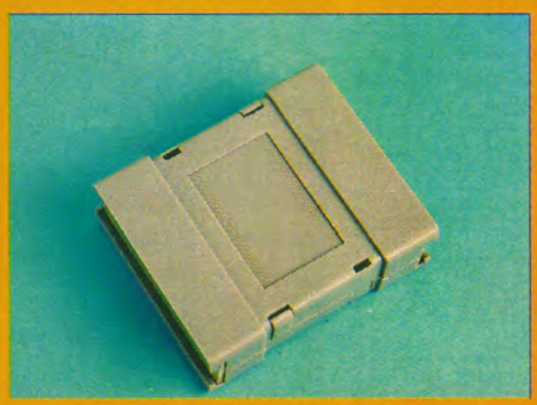

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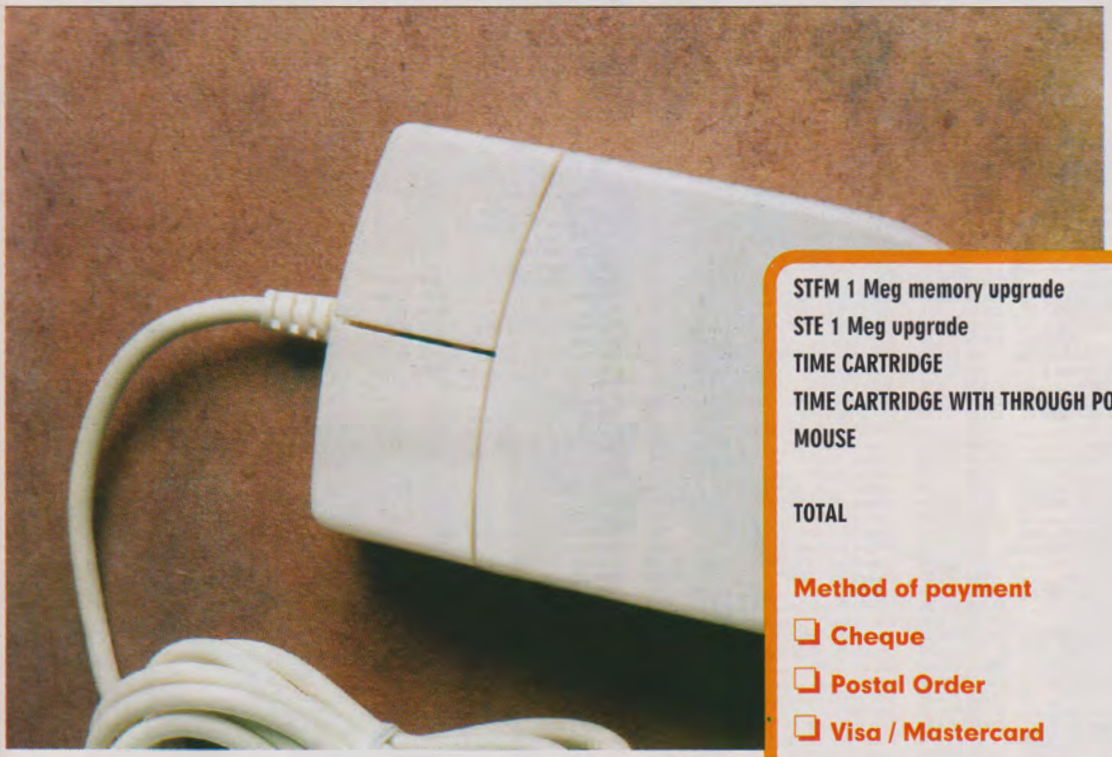

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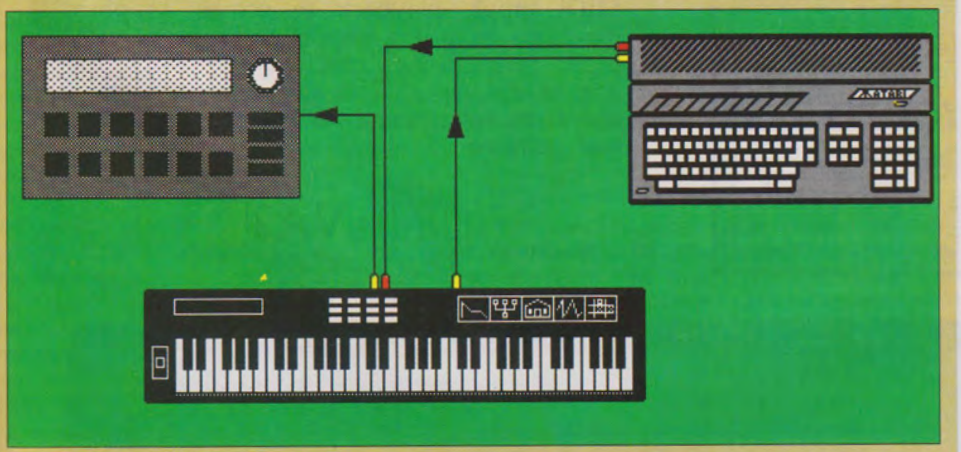
MIDI MONTHLY

The DS-330 is a great new sound module from Roland with 317 sounds and nine drum kits. Its partner in crime, the DR-660 is a drum machine with 255 percussion sounds. Check out the reviews on pages 66-67.

CartMaster is the answer to your problems with cartridge port congestion. See page 63.



How do you incorporate a drum machine into your system? Find out on page 64.

***With** MIDI Monthly, a sequencing program running on your ST is just the start. . .*

***How** about a high-quality sound module that is capable of playing 16 instruments at the same time for less than £350? And a drum machine partner for a similar sum? Check out the Roland DS-330 and DR-660 – the review starts on page 66.*

***Trouble** with cartridge port congestion? Then CartMaster from Wizztronics could solve your problems – see page 63.*

***Building** a MIDI System continues this month on page 64, showing you how to cable your system if you want to add a drum machine, while on page 68 we look at what MIDI Sync is all about.*

***Finally**, Modest MIDI, also on page 68, is the jargon-buster where all of those terms that you keep finding in these pages are explained for you.*

***If** you have any MIDI problems which no-one else can answer, just drop a line to me, Vic Lennard, at MIDI Monthly. In the meantime, play on!*

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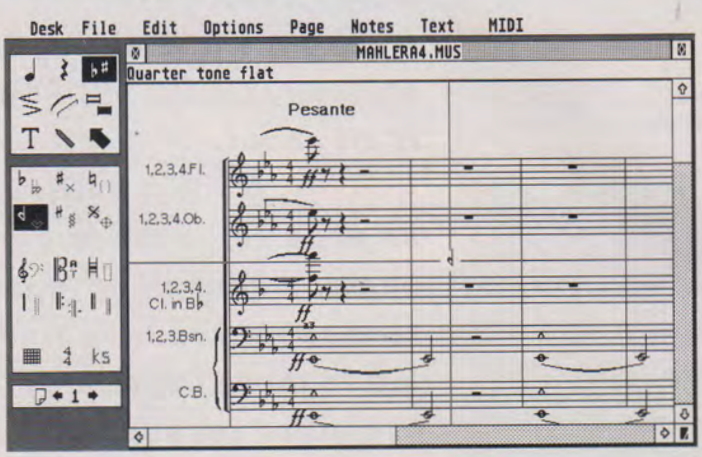

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A PORT FOR ALL CALLS

ADD ONS ADD ONS

Last month MIDI Monthly reviewed Replay 16, the Microdeal sampler which connects via the ST's cartridge port. What happens, however, if you have more than one cartridge? Enter CartMaster. . .

Few people realise just how powerful the cartridge port on the side of an ST is. Its original purpose was to allow programs of up to 128 Kilobytes to be run from a ROM (Read Only Memory) chip built into a cartridge. One of the first to make use of this was a device called BackPack which provided, amongst others, a diary, text editor and printer set-up program. In fact, it had its own 'c' icon on the desktop, a small c being used for a cartridge while a large C is used for a hard drive partition. Most hand scanners connect to the cartridge port for a similar reason – the digital transfer of images from a scan head to a program loaded up on the ST.

MUSICAL APPLICATIONS

The majority of programs which make use of the cartridge port are musical ones. For instance, Microdeal's ***Replay 16*** uses circuitry in a cartridge to convert audio signals into a digitised equivalent when sampling a sound. The other members of the Replay family follow a similar route.

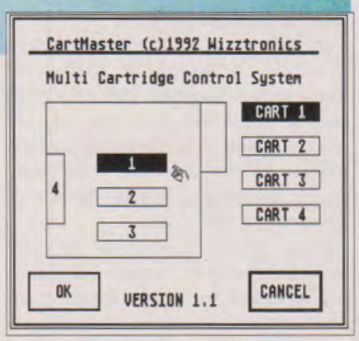
This circuitry is most commonly used by various music software manufacturers to copy protect their programs. Steinberg, C-Lab and Hollis Research all use it for this purpose. Yet another use is to provide a means of connecting a basic synthesiser to the ST, as with FM Melody Maker from Hybrid Arts. This simply had a pair of audio outputs for connection to a hi-fi system or the like, although it is no longer available.

So what happens if you have various of these cartridges? The only way to work is to continuously plug and unplug them. The metal contacts on this port are nothing to write home about, and this leads to programs failing when they misread the data from the cartridge.

CARTMASTER

The only option up until now was ***Combiner*** from C-Lab which retails at £187. However, ***CartMaster*** cuts nearly £60 from this price and offers the same number of expansion ports, namely four.

The CartMaster desk accessory or program lets you select which of the four cartridge slots is active.



CartMaster is a substantial plastic box with a card connector which push fits into the ST's cartridge socket.

The connector could do with being a bit shorter and at right-angles to the side of the casing; it doesn't fit snugly against the side of the ST and could be dislodged if accidentally pushed. The review model had the connector at a slight angle which meant that a piece of card had to be inserted underneath the ST.

FITTING

Three of the cartridge ports are on the top of ***CartMaster*** while the fourth is on the side. This is a good idea – Replay cartridges are quite large and heavy and don't take kindly to being balanced on their side.

The three ports on the top sit proud of the surface which is another good idea – try fitting any cartridge other than a C-Lab one into Combiner and you'll see what I mean. All of the cartridges that I tried fitted perfectly.

IN USE

Use is quite straightforward; plug in ***CartMaster*** followed by the cartridges, taking great care to make sure that they are the correct way round, and then power up. The supplied disk has both a desk accessory and a program either of which bring up a small diagram from where you select which port is to be active. When you change to another program you simply select that cartridge before loading the relevant program. One improvement would be to have an LED next to each slot to show which one is currently in use.

At £129.95, you may feel that ***CartMaster*** is expensive, but it's difficult to manufacture such a device much cheaper due to the electronics required for smooth operation. If you use the cartridge port for different programs, ***CartMaster*** is worth consideration.

INSIDE INFO

One little-known fact that you can use to amaze and delight your friends is that various developers originally toyed with the idea of using a RAM cartridge instead of a ROM one.

The basic intention was to load data into the cartridge from a program that was running on the ST – this would be held after a reset.

Unfortunately, the best laid plans of mice and men can't always cope in the face of technology... the idea didn't work due to errors when trying to write to the RAM in the cartridge and so the plan was eventually abandoned.

Expands the cartridge port to accept up to four cartridges
Desk accessory switches between slots
Accepts all different sizes of cartridge

PROS AND CONS

Not a snug fit against the side of the ST
Could do with LEDs to show which slot is active
Rather expensive although cheaper than the alternative!

"Takes the hassle out of multiple cartridges"

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OVERALL 83%

BUILDING A MIDI SYSTEM

This month we've taken a look at the Roland DR-660 drum machine. But just how do you include a drum machine in a MIDI system?

Last month, we showed you how to incorporate a drum machine into your MIDI system.

The basic idea was to use it as a sound module, but after reading the review of the Roland DR-660 in this issue (page 67), you may well be asking yourself what the advantages are to using the drum machine in the intended manner. Since it has a pattern-based sequencer built in, should you operate the drum machine from this?

It all depends on how you like to work. Many people play the sounds in their drum machine from the keys on a keyboard which is possible because each drum sound has an allocated MIDI note. Hitting that note on the attached MIDI keyboard will play the correct drum sound. The sequencing program running on your ST is then used to record the notes from the keyboard.

HIDDEN EXTRAS

However, a drum machine has a lot more going for it than simply the sounds. By hitting the pads, you get an instant feel of the rhythm, something which doesn't happen with a keyboard because of the difference in reaction between pads and keys. With a drum machine in record mode, you can instantly set a loop and add drums each time the pattern loops round. For instance, you might set the pattern to a length of two bars and just hit the bass drum pad first to get a basic beat. Then you might add the snare drum followed by the open and close hihat.

RECTIFYING MISTAKES

If you make a mistake, there is usually a delete button which can be held down along with the relevant drum pad to erase a sound which you have recorded in the wrong place. All of this happens while the drum machine continues to play. To many people, this is the only way to record drums because as the track gradually builds you get more and more ideas of what to add.

Drum machines usually correct your timing automatically – a feature that is known as auto-quantising – which means that each time you hear the pattern looping round, the drums appear to be in the correct place, even if you've played them in slightly incorrectly. Computer sequencers don't generally offer this facility.

SONG CREATION

Putting a song together on a drum machine is simply a matter of placing the various patterns that you've recorded into the correct order. Taking the two-bar pattern above as an example, you may want to repeat it eight times to create a 16 bar verse.

Most drum machines let you simply type in a 'repeat x 8' command which is, again, easier than any similar procedures found on a computer sequencer.

Drum machines have come a long way in the past five years or so and even budget machines such as the DR-660 offer facilities that you would definitely miss out on if you were simply working with it as a sound module.

For example, the DR-660 has a Nuance function which alters the tone of the particular drum it is applied to. Such a feature can't be accessed by playing the sounds from a keyboard.

CONNECTION

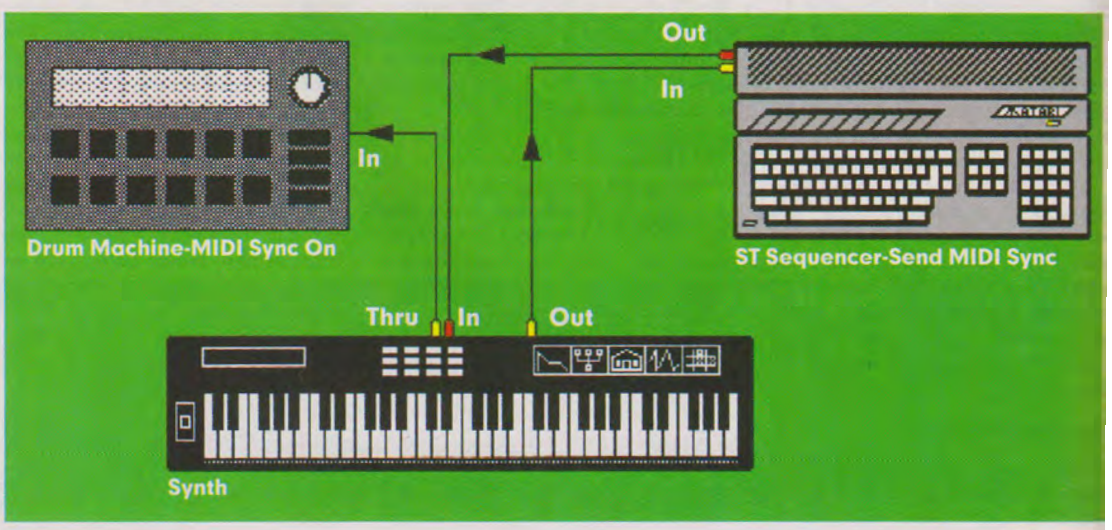
You connect up the system as you would if you were using the drum machine purely for its sounds. The difference is in the settings on the drum machine and sequencer. The sequencer must be set to transmit various commands so that the drum machine will play in time with it. Synchronisation, as this is called, is looked at in more detail in 'What is MIDI Sync' on page 68. MIDI Clock transmit has to be turned on and, if a separate function is included, so must Song Position Pointer.

The latter is used to allow you to start the sequencer in the middle of a song and to then have the drum machine start at the correct place in the song.

The drum machine must then be put into MIDI Sync Receive mode from which it will start playing once it receives the relevant messages from the sequencer.

GENERAL MIDI

General MIDI (GM) has been mentioned a few times in MIDI Monthly. If you recall, the intention is to provide a high degree of compatibility between different synth modules in terms of sounds. Included in the General MIDI Specification is a drum mapping so that the same MIDI Note numbers are used to call up the same drum sounds on each GM sound module. For instance, the bottom C on a five octave MIDI keyboard will always play a bass drum while the D above it plays a snare drum. One problem is that the Drum Map in General MIDI only specifies 46 drum sounds in total which is inadequate – after all, the DR-660 has 51 bass drums and 77 snare drums for starters!



The basic set-up for a drum machine to play in time with a sequencer program on the ST.

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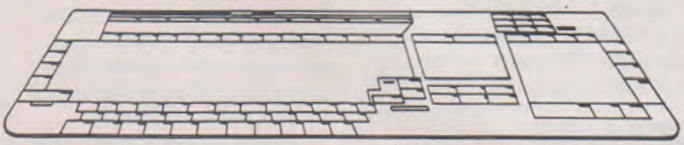

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DOCTOR OOH!

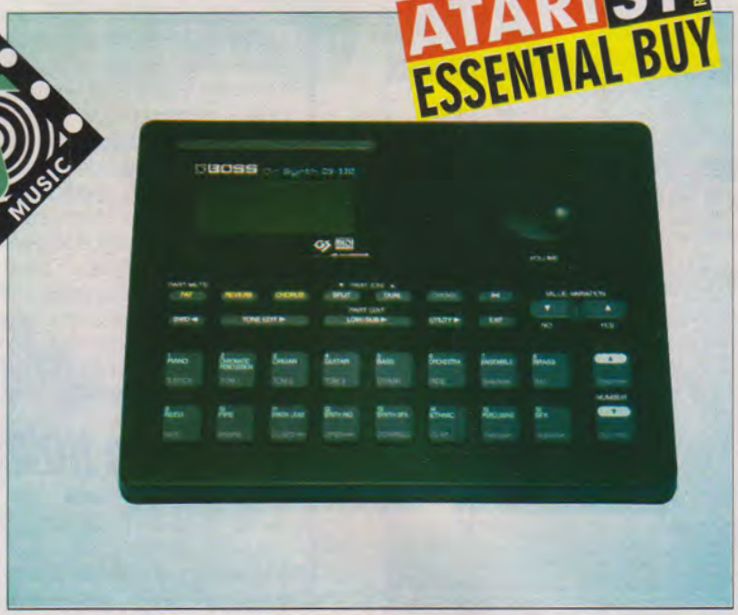
Looking for that first synth module for your MIDI system? Roland has just the thing with its new Boss Dr Synth DS-330

Nearly two years ago, Roland launched its Sound Canvas SC-55 sound module, an affordable unit with over 300 sounds, nine drum kits and excellent sound quality. Affordable? Well, £550 is certainly a reasonable sum for such a piece of kit, but then Yamaha released the comparable TG100 at £349.

Roland's response to Yamaha's action is a cut-down version of Sound Canvas in the DS-330, which is commonly known as the Dr Synth.

It is actually unfair to refer to it as being a cut-down version - it would probably be more accurate to describe it as 'streamlined'. Five years ago, Roland launched the first multi-timbral synth module in the MT-32 (Multi-Timbral, 32 voices) and most sequencers since then have had a demo song intended for the MT-32. All you have to do is to turn the MT-32 on, load up the song and play.

With the Dr Synth, Roland has removed all of the MT-32 compatible tones from Sound Canvas, thus leaving 156 sounds and eight drum kits. However, with all its buttons the Dr Synth resembles a drum machine more than a synth module.



Roland's Dr Synth – an ideal first synth module.

PLAYING THE PART

The Dr Synth works in one of two modes - Single or Multi-timbral. Single mode is used for playing one sound from a keyboard, while Multi-timbral transforms the Dr Synth into a sound module capable of playing up to 16 different sounds at the same time on the 16 different MIDI channels.

The 16 main buttons each call up a different bank of sounds. For instance, the first button will access the Piano bank which includes three acoustic pianos, a detuned honky-tonk variety, two electric pianos, a harpsichord and even a clavinet.

Sometimes a sound has an alternative variation – Electric Piano 1 has an alternative called Detuned EP 1 which only sounds a little different. Providing 16 buttons for easy sound selection is a very good idea, as is the large rotary volume control.

EFFECTS

Once you select the sound that you want to hear, you can add either, or both, of the two internal reverb and chorus effects, both of which can be edited. For example, there are eight types of reverb and delay effect, each of which have various editable characteristics. There's also a 'fat' effect available which combines the current sound with one either slightly detuned or down an octave.

EDITING

Various aspects of the sounds can be edited, especially the envelope, which affects the fade in and out, and the frequency cut-off and resonance which affect the tone. You can even combine sounds so that hitting one key on a keyboard plays two sounds when using Dual mode.

Single mode can also be used to play through the drum sounds using the same 16 buttons. From TR808 drum machine through heavy rock to jazz brushes, there is enough variety to satisfy practically anyone.

TASTY TONES

When used multi-timbrally, the Dr Synth is an absolute powerhouse. A different sound can be set for each MIDI channel, the only restriction being that MIDI channel 10 has to have one of the eight drum kits as per the General MIDI System, the MIDI protocol on which Roland's GS format is based (see the Inside Info box on the right for more on this). Chorus and reverb can again be used for sound enhancement.

Most of the sounds are very good. Piano 1, Steel-strung Guitar, Brass 1 and Applause (!) would have to rate near the top of my list, but all 156 sounds are worth a listen. Quite often you can make a decision about a sound heard in isolation which is unfair once it is heard in the context of a mix of sounds.

WORTH A LOOK

Roland's Dr Synth is certainly worth a trip down to your local stockist. If you are currently looking for a good all-rounder at less than £350, the chances are that you will buy it as soon as you've heard it.

156 sounds and eight drum kits
Lots of buttons for selecting tones and playing the drum sounds
Easy to use
Cheap for what it delivers

PROS AND CONS

Buttons lack a positive feel

"An easy to use, excellent sounding synth module – likely to be a best seller"

NAME: BOSS DR SYNTH DS-330
COMPANY ROLAND (UK) LTD
CONTACT: 0252 816181

PRICE: £339
RELEASE DATE: OUT NOW
MIN MEMORY : N/A

EASE OF USE	✪✪✪✪✪
DOCUMENTATION	✪✪✪✪✪
EFFECTIVENESS	✪✪✪✪✪
VALUE FOR MONEY	✪✪✪✪✪

OVERALL 94%

INSIDE INFO

To try to make sounds in synths more compatible, the General MIDI System was designed. All 128 basic sounds in a GM module are the same and are called up by the same MIDI Program Change numbers. Program Change #1 will always call up Acoustic Piano #1. The mapping of the percussion sounds across the keyboard are also defined, and such a drumkit is always on MIDI channel 10.

Roland's GS format goes a little further than GM by having secondary instruments assigned to banks. This allows GS sound modules to go beyond the 128 sounds permitted by MIDI Program Changes.

Currently, Roland's Sound Canvas (SC-55), enhanced Sound Canvas (SC-155), CM-300 and CM-500 computer sound modules, JV-30 keyboard, JW-50 keyboard/sequencer and DS-330 Dr Synth all adhere to the GS format.

BOSS BEAT

Following in a long line of tradition is Roland's latest beat box, the Boss Dr Rhythm DR-660. A perfect match for the Dr Synth?

For those of you who have been involved with music for a while, the name Dr Rhythm should ring bells, as Roland has released various drum machines under this name. If you've never heard it before, you'll certainly remember it after this review!

Drum machines have certainly come a long way in the last six years – I remember paying £800 for one of the first machines

which incorporated real, sampled, drum sounds. Were the sounds a patch on the latest drum machines? Were they heck!

As for the facilities, you tended to get far less sounds, no special effects and pads that were, shall we say, less than helpful to creative recording.

BASIC LAYOUT

Identical in size and shape to the DS-330 (reviewed opposite), the DR-660 has 16 fair-sized, velocity sensitive drum pads from which you trigger sounds. Because it is rectangular in shape, you can quite comfortably use two fingers for a fast roll. Two large rotaries control the input of data and the volume, while to the bottom left are the Record, Start and Stop buttons. A bank of eight buttons access all functions while the 12-button alpha-numeric pad lets you number and name items as necessary. The layout is easy to follow and the current function is clearly shown in the large display.

SOUNDS GALORE

The DR-660 has a total of 255 different percussion sounds. The first action you take with any drum machine is to listen to the sounds either via in-built patterns (of which the DR-660 has 100) or by assigning the sounds one at a time to a single pad and playing them. I prefer the latter, and was amazed at how clean and crisp the sounds are. Of the bass drums, BBallK is a kick drum which lives up to its name, whilst DanceK will enhance any rhythm track as would Hard K. Many of the bass drums have a nice 'click' at the beginning of the sound which cuts through in a mix. The snares are equally impressive – CrkerS is top of my list with a punchy, crisp crack. Why anyone should want to call a snare CrudyS is beyond me, especially as it sounds rather good!

Not all of the drums are aimed at dance music, however; there are a whole selection of rock and pop sounding drums. In fact, it is fair to say that a decent kit could be put together for any style of music, including jazz with brush sounds – even country music is catered for, although I'll leave to your imagination which one of the seven letters has been left out on the display. . .

USER KITS

Add to this the fact that you can edit the level, pitch, decay, pan and nuance (tone) for each sound and you have practically unlimited possibilities. For this reason, there are 32 user kits to go with the six preset ones, each holding up to 32 instruments – you are unlikely to run out of memory for your specialities. Another nice touch is being able to layer drums using the Pad Bank feature. This way you can either have a single pad triggering two sounds or velocity mix them so that varying hardness of hit will change between the two sounds.

CHILD'S PLAY

Recording patterns and songs couldn't be easier. You simply select one of the 150 user patterns, set the length in beats and hit Record and Play. When the metronome sounds, you start playing the pads. If you make a mistake, hold down the Delete button followed by the sound that you want to erase.

To create a song, you simply chain patterns together and save the result as one of the 100 available songs.

While the DR-660 won't help you to create innovative new drum rhythms, it certainly removes the hassle of having to learn complex procedures and lets your creative juices flow!

ATARI ST REVIEW
ESSENTIAL BUY

"A great partner for the DS-330 – great sounds and rich in facilities"

NAME: BOSS DR RHYTHM DS-660
COMPANY: ROLAND (UK)
CONTACT: 0252 816181

PRICE: £335
RELEASE DATE: OUT NOW
MIN MEMORY : N/A

EASE OF USE	★★★★★
DOCUMENTATION	★★★★☆
EFFECTIVENESS	★★★★★
VALUE FOR MONEY	★★★★☆

OVERALL 91%

INSIDE INFO

Of the 255 on-board sounds, there are: 51 bass drums, 77 snare drums and rimshots, 39 toms in 11 sets, 11 hihats, seven crashes and rides, 19 assorted percussion sounds including tambourine, cowbell and sleigh bells, six congas and bongos, 11 sounds from famous Roland drum machines including the infamous TR808 cowbell, five scratch sounds, 11 sound effects, 11 reverse drum sounds, five ambient only sounds and two basses.

The DR-660 also responds to MIDI sync commands from a sequencer so if you wanted to, you could simply use it as a drum sound module and play the sounds via the keys of a keyboard. However, this removes most of the fun of using a drum machine!

255 high-quality percussion sounds
Easy to use
Enough features to give a Rhythm track a live sound

PROS AND CONS

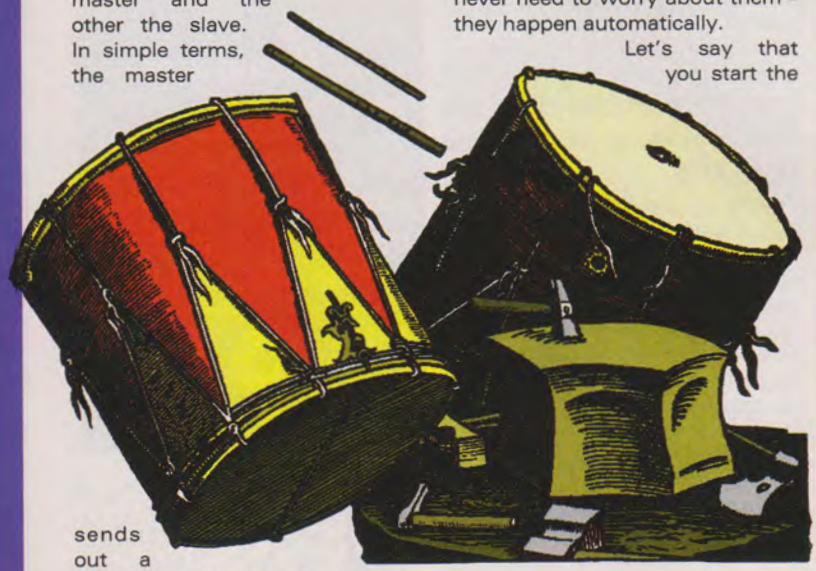
No MIDI Thru

What is MIDI SYNC?

It's useful to know that a drum machine can be made to stay in time with a sequencer, but just how do you do it and why?

In this issue of MIDI Monthly, we've looked at a great new drum machine, how it can be linked into your MIDI system and what the settings have to be for the drum machine and sequencer. The question now is: how does the drum machine, which is in effect a sequencer, stay in time with the sequencing program running on the ST?

The timing of any sequencer is controlled by its own internal clock, so in order to get two sequencers to run in time with one another, one becomes the master and the other the slave. In simple terms, the master sends out a message each time it is about to move onto its next clock position and this instructs the slave to do likewise. The message is called MIDI Clock and 24 such messages are sent from the master each quarter note, or crotchet. Each time the drum machine receives one of these it moves its internal clock onto its next position and so stays in time with the computer sequencer. This would also work the other way around, with the drum machine as the master and the ST as the slave, but there is little point in this.



STARTING OVER

While MIDI Clock keeps the two devices in time with each other, the drum machine has to be told to start in the first place. A MIDI Start command takes care of this. When the Play button on the sequencer is pressed, a MIDI Start command is first sent and then followed up by MIDI Clocks. The drum machine starts and will then stay in time thanks to the MIDI Clocks.

If you hit the Stop button on the sequencer, you want the drum machine to stop as well. This is achieved by sending a MIDI Stop message. If you then hit Play again, you want the drum machine to continue playing from where it stopped and so a MIDI Continue message is used. These messages are transmitted down the MIDI cable in a manner which is invisible to the user so you never need to worry about them – they happen automatically.

Let's say that you start the sequencer in the middle of the song while the drum machine is positioned at the start of the song. The first MIDI Clock is sent out by the sequencer and received by the drum machine. However, while it is in time with the sequencer, it's a long way behind!

To get around this, there's a MIDI message called Song Position Pointer which is sent out by the sequencer before the MIDI Start command. This tells the drum machine where the sequencer is in the song and allows it to set itself up for the MIDI Start and MIDI Clocks.

However, MIDI Continue and Song Position Pointers are optional and you need to check the MIDI Implementation table to see whether these exist for your drum machine. For more information keep reading MIDI Monthly...

MODEST MIDI

Just the place to explain all those terms that we take for granted... This month it's a look at common terms used in synths

DUAL MODE

This usually refers to the overlaying of two sounds on a keyboard so that hitting one key plays two sounds. Dual Mode is commonly used to create a killer 'pad' sound, one that is used to fill the background, or to make a convincing instrument section. For instance, trumpets may be overlaid with trombones for an authentic brass section.

MODULATION WHEEL

Most synths have one of these which is used to add a degree of 'warble' to a sound. It actually controls the Low Frequency Oscillator (LFO) which changes the pitch of a sound so causing the warbling effect.

MULTI-TIMBRAL

Literally meaning 'many sounds', a multi-timbral synth plays more than one sound at the same time by responding to information on more than one MIDI channel. For example, piano might be on MIDI channel 1, bass on MIDI channel 2 and drums on MIDI channel 10. A multi-timbral synth can effectively be viewed as lots of independent sound modules in the same box.

PITCH BEND WHEEL

Another common feature on a synth. Not surprisingly, moving the pitch bend wheel changes the pitch of the note, but the amount that it changes by, in semitones, is down to the setting of the pitch bend range on the sound side of the synth or a sound module that the keyboard is controlling.

POLYPHONY

The total number of notes which a MIDI synth is capable of playing is usually referred to as the polyphony. Not to be confused with 'voices' (see below).

PRESSURE SENSITIVE

Another term for Aftertouch, which is extra pressure brought to bear on the key of a keyboard after it has been initially played. Used to control certain MIDI effects such as modulation or pitchbend, this is often referred to simply as 'pressure'.

SPLIT

A feature where the keyboard can play two separate sounds or instruments. When you set a split point, the notes above that point are on one MIDI channel while those below are on a different channel. This lets you play, say, a bass sound with your left hand and a lead synth sound with your right.

TOUCH SENSITIVE

Commonly known as velocity-sensitive, the speed with which your fingers hit the keys controls the velocity value for your playing. The velocity of a note is most commonly used to affect the volume level, although it may also be used to change the tone of a sound.

VOICES

The number of voices usually matches up with the number of sound generators in a synth but more than one voice may be used to create a sound. For instance, a sound called 'piano-strings' will probably use two voices, one for piano and the other for strings. If such a synth had 24 voices, and two of these were being used for each sound, this would give a polyphony of only 12 notes.

stereo MASTER

When you are considering purchasing a sound sampler there are several to choose from. Why compromise? Your choice should be the new full featured STEREO MASTER for the Atari ST range of computers. The package that gives you more extras than a M series BMW. By purchasing this state of the art product, which combines a quality sampler with the expertise of over ten years of software programming, you are purchasing a top quality product in the knowledge that it is not only compatible with existing Microdeal products but will also be with future ones.

What is Stereo Master?

Stereo Master is a low cost, high quality sound sampler for the Atari range of computers. The sampler cartridge enclosed in the package plugs into the ROM port at the side of the computer and allows you to analyze the sounds, coming in, change the way they sound using realtime special effects or record them from devices such as personal cassette players, Compact disc players etc. Once in the computer STEREO MASTERs unique editor will enable you to edit the sound in practically any way you can imagine. Once you have the sound sample how you want it, you may incorporate it into other programs such as Quartet or play it using routines supplied for many of the commonly available BASIC's.

THE MAIN EDITOR SCREEN

The Sampling Software

Includes many features you would expect to find in a professional editing suite;

* Realtime playback ghost cursor marker
* Cut or Delete selected sample area
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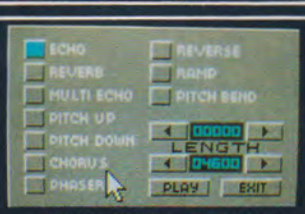
* Shrink by 33%/50% by drag or wipe
* Fade in/out with selectable degree of fade
* Filter sample with hard/soft filter
* Full editting and control facility for Left/right channels
* Hifi Stereo playback option through PLAYBACK cartridge
* Record Frequency from 3.0 to 27.9 Khz in ST mode
* Record Frequency 6.25, 12.5 and 25K in STE mode
* Bounce sample
* Decrease Volume
* Increase volume
* Trigger recording
* Loop sample
* STE Volume,Bass & Treble control
* Clear Left/Right samples
* Selectable trigger volumes
* Paste sample (using buffer)

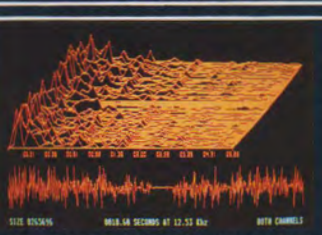


REAL TIME SPECIAL EFFECTS MENU

The Special Effects Software

For the first time ever you can emulate sound effects in real time, just like the sound labs can for film studios, normally the hardware to produce these effects would cost many times more than this package. Features on the FX menu include;

* Built in realtime special effects including, Echo, Reverb, Ramp, Pitch up/down, Multi Echo Chorus, Phaser, Reverse and Pitch Bend.
* Parameters of FX can be modified to provide 1000's of different effects.



3D DISPLAY OF SAMPLE

The Analytical Software

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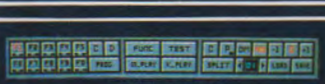
* 3D display of sample frequencies (Fast fourier transform)
* 3D display also includes 2D envelope display plus sample information
* Built in realtime spectrum analyzer
* Stereo Oscilloscopes with trigger markers

36 BAR SPECTRUM ANALYZER



THE MIDI CONTROL PANEL

The MIDI Software

Now you can trigger samples using external MIDI keyboard or the ST/E's keyboard. Just look at these features;

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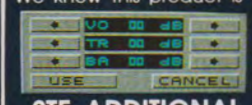

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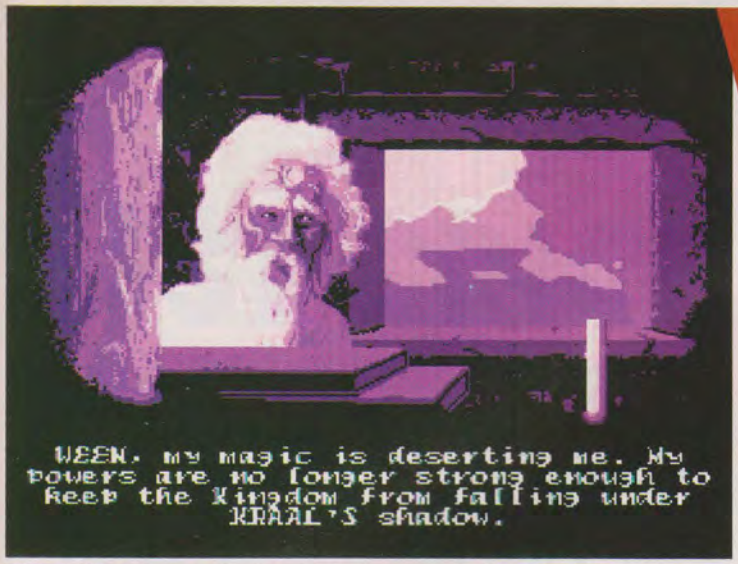
WEEN

What's in a name? Not a lot if Coktel Vision's latest hero is anything to go by. . .



This is Ween's grandfather. He's the guy who banished Kraal the first time, although he's not very powerful now, which is why his descendant has been sent instead of him.

Ween's first task is to escape from his house. The trap door which leads to the caves underneath is locked, and he doesn't have the key.

The story of ***Ween*** is the usual 'great evil will befall us unless you do something to stop it' one. In this case, Ween has to stop the evil Kraal from taking over the kingdom of Blue Rocks. And how is he to do this? By raising an army and smiting Kraal? No, he must open the gate to a temple, battle a dragon with 100 faces and convince an age old guardian to open the temple's inner-sanctum. The reward for doing this? Three grains of sand. Not much good against a dark lord.

It doesn't end there, though. These grains of sand have to be placed into a holy hour-glass called Revuss three days from the start of the adventure. Apparently this will stop Kraal laying waste to the land.

The all-important user interface is very easy to get to grips with. All commands are issued through the mouse. To travel between screens you simply move the pointer to a likely looking exit and it turns into a door if you can go that way. The same thing applies to objects. Clicking on an item picks it up and it can then be stored in your inventory or used in conjunction with another object.

There are some special features which come in very handy. As well as the 15 save-game positions, one time-saving feature really stands out. The movement option allows you to instantly go to any location you've already visited, without having to pass through any other screens. There's also an on-screen note-pad, which is perfect for jotting down the subtle clues you're given, and a selectable menu font just to round things off.

FRENCH POLISH

Ween is a typically polished French game. Despite the rather bizarre plot, the game is generally well structured and progresses in a logical manner. I particularly liked the joker feature, which allocates you a certain number of clue-cards which can be employed at any time through the game, dispelling any hint of frustration. Although this means you can save the game, use all your jokers to find out how to get through the next few screens then reload with them all intact.

How to cross the precipice is the problem here. It might be a good start to tie the planks together.

Because the game is time-limited, it's virtually impossible to complete in one sitting – you will make mistakes which will eat into the three days you have to complete the quest.

The graphics are also very noteworthy. Apart from the occassional unconvincing monster, the backgrounds and character graphics are excellent throughout. They load fast as well, which is useful as the game isn't hard disk installable.

Despite all these features, ***Ween*** doesn't offer anything new in terms of gameplay and puzzles, many of which just require one object to used in conjunction with another. I found the lack of suprises dull after a while, but if you don't go adventuring often, this is a game you should make tracks for. It's not fantastically difficult and the control system and excellent all-round presentation make this game perfect for adventure novices.

There are several main characters who crop up throughout the game with advice and the occasional useless comments. Ubi and Orbi, for instance, accompany Ween at the outset of his journey and don't offer up any significant help, while Petroy, an old guy with a pointy hat, is in constant telepathic contact with Ween, and acts as a translator when he comes across any strange messgaes.

Ween's strangest ally is Urm, a giant vampire bat which lives on a diet of strawberries. He also has strange magical powers, which can be called upon by playing a magic flute.

Excellent graphics
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FIRST IMPRESSIONS

GRAHAM GOOCH'S TEST CRICKET

Wayne Legg dons his shinpads and comfy-fit box to test out the latest in a long line of famous name sporting licences

After a few balls our first run is scored.

Our over-confidence is showing going for the second run our second player is run out.

AUDIOGENIC

This game is very near completion, and from what we've seen so far it looks like all ST-owning cricket fans are in for a real treat.

The game opens with a sequence depicting an international cricket match and soon moves on to the first of a wide range of menus. You can either play against another player or the computer, and after confirming your choice of real-life opponent, you select the amount of overs, innings and days you require.

Personally, I found the one-day, 30-over, two-innings game the most exciting – but then again this represents my preference in real-life cricket – and there are enough selections to keep even the most ardent test fan happy. You then pick your team, which can be any of those currently recognised as in the world's first class plus a World XI, and your opponents.

Every team has a squad of players, old and new, from which you must pick 11 men. Obviously, the World XI is the most attractive, as you can create one team containing such cricketing legends as Truman, Holding, Khan, Boycott, Sobers, Lloyd, Lilley and so on.

All the players are rated in their skills – from Aggressive in batting to Fast in bowling – and you need to think carefully when adding players to your squad. It's no good having a team of aggressive batsmen if they are lousy bowlers and fielders!

After choosing the World XI as my side, it's time to select the players. Here, it is Lloyd, Boycott, Lillee and Gavaska.

TRADITION

The game commences in time-honoured fashion with the toss of a coin, and this is performed with a lovely graphic sequence.

When the batting team and fielders are sorted out, the game proper begins. The screen then opens up to depict an angled view of the bowling area. The batting figures are well-defined and around three and a half inches in height, while the colours on the screen are well co-ordinated and very crisp.

BOWLING

If you are bowling, you have to move an independently floating white box to a position where you would like to see the ball bowled, and then waggle the joy-stick rapidly to ensure that your bowler increases his pace. You can estimate the speed of your bowler, as it is indicated by a small box at the top right-hand corner of the screen.

Speed is vital when fast bowlers come into play, but a deft touch on the joystick is needed when you control leg-break and off-spin bowlers, as they can easily over-pitch if their build-up is too fast.

The game proper begins: the World X1 are batting and the opposition bowler is about to bowl the first ball – as indicated by the white box.

In the meantime, the batting player has to move the batsman along the crease to where they think the ball will be delivered, and then move the joystick to play the correct shot whilst pulling the trigger to hit the ball.

Initially batting may prove to be quite infuriating, but once you have mastered it, you'll be able to perform such shots as the Sweep, the Hook, the Block and the Drive.

Once the ball has been struck, the batting player has to waggle the joystick to ensure that the players run the amount of times that are required – this is depicted by an animated sequence to the left. At the same time, the fielder's team does its best to cope in the positions that it has been allocated.

OPTIONS

When each over is finished, an option to review the score-card becomes available, and from here you can change the batting order, replace bowlers and re-organise teams.

The game itself contains everything that real-life cricket does. Bowlers will suffer the penalty of 4-wides if their wicket-keeper fails to stop their ball; overthrows can be run for; LBW is a possibility; bouncers can be bowled; legbys can be called and catches can be dropped - everything is there.

The game should be released in early December and looks set to bowl over any cricket enthusiast, armchair or otherwise.

SENSIBLE SOCCER 92-93 SEASON

Renegade looks set to follow up its summer soccer success with this new upgrade

RENEGADE

Fans of Renegade's ***Sensible Soccer*** – and there should be plenty after Tony Dillon's review in issue five – will be interested to note that an upgrade will be released in November. The game will still play like the original, but many additions have been programmed in to make it more authentic.

The back-pass rule has been added, so if a defender passes back to his keeper, he will dribble the ball out of the area and play as a back four player. Indeed, goalkeepers have been upgraded overall, as they now hang onto the ball when appropriate and tip it over the bar and push it around the post when it's not.

Keepers have also been given personal characteristics. For example, if certain goalies receive a back-pass, they will think nothing of dribbling the ball up to the half-way line in the style of Bruce Grobbelaar!

To even things up a bit, computer-moderated teams have had their forwards' shooting skills increased, and they are more accurate from both further out and sharper angles.

Red and yellow cards have been added too, making it easier to recognise when players have been booked or sent-off. Furthermore, in line with the new FIFA regulations, referees will use the cards as instructed – so anyone committing a deliberate foul against a player in a goal-scoring position will find themselves having an early bath.

NEW WORLD

Other modifications serve to update the game in line with recent changes in the football world. For example, all of the 104 British league teams have had their squads totally updated – so Gazza and Lineker no longer play for Spurs. Both Yugoslavia and the USSR have been omitted as they no longer exist. They have been replaced by all the new regions, including Estonia, Latvia and Croatia. Each team has had its squad thoroughly researched, as the game actually uses players who currently play for those areas. Israel is now includede, having moved from the Asian World Cup area to the European.

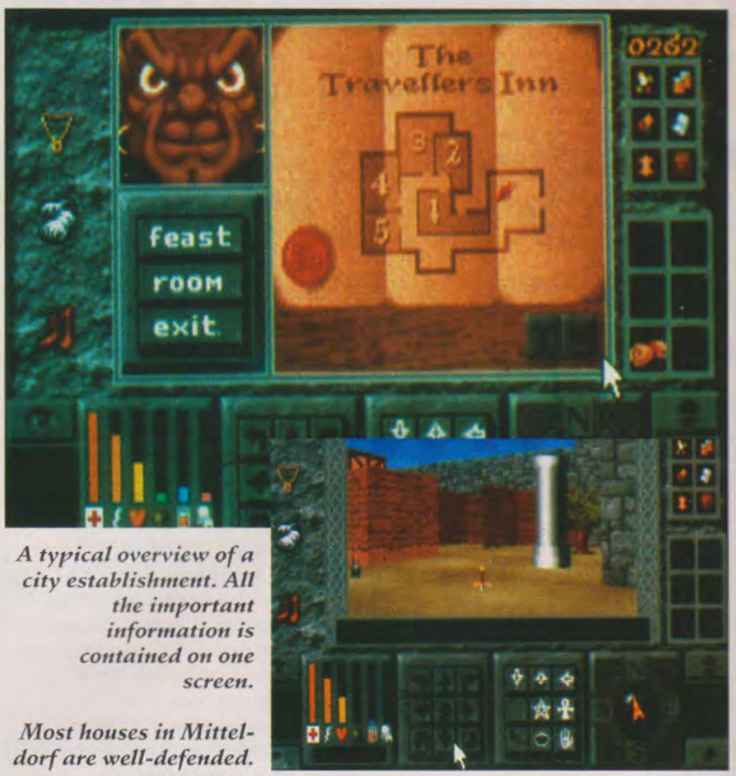
Cities involved in the European Cup have been added – including Leeds, Sheffield United, Hearts and Lazio (plus Gazza) – and true to real life, the teams are split into two leagues as the cup progresses.

Another nice feature is the inclusion of a whole range of new custom teams, including both the English and German 1966 World Cup Final sides, which enables you to replay the '66 world cup all over again. For added reality, the screen switches to black and white if these two sides are selected to play each other.

Overall the upgrades make an already excellent game better. Renegade's Tom Watson has confirmed that anyone who bought the original ***Sensible Soccer*** will be eligible to buy the new '92-'93 upgrades at around £5. Contact Renegade on 071-481 9214 for further details on this offer.

Sensible Soccer fans will be impressed by the updates in this new version.

LEGENDS OF VALOUR



A typical overview of a city establishment. All the important information is contained on one screen.

Most houses in Mitteldorf are well-defended.

Legends of Valour looks set to shake the role-playing world by its ankles

US GOLD

Designed by Kevin Bulmer (***Corporation***) and Ian Downend (***Resolution 101***), ***Legends*** is based in and around the medieval town of Mitteldorf, on a volcanic island called Wolfbrood. Using traditional role-playing techniques you create a character to whom you relate. Then, unlike almost any other role-playing game, you set them loose in the town and await for adventure to weave itself around you and not vice-versa.

Although there are set plot devices in ***Legends***, it is up to the player to become immersed in this world and see what response their actions provoke. This is because the game is set in a 'Virtual World', where no predetermined path has been set, and each character – itself a 'Virtual Person' reacts to what your character does.

Each 'Virtual Person' has their own job, house and personality and they will interact to your character accordingly. For example, if your character kills a thief who attacked him, it is quite likely that a revenge attack will be launched by the deceased siblings – if they find out.

The game has various storylines which players can follow, but bringing these to an end is not essential to completing the game. ***Legends***, it would seem, appeals to both the role-player, who likes to see their character's personality and personal ability develop, and the hack and slayer, who likes simply kill monsters.

To satisfy the latter, the game contains 27 and a half miles of dungeons, all of which are inhabited by a wide variety of monsters, whose sole aim is to make your life short and miserable.

MAP MANIA

One nice touch is the inclusion of auto mapping in the town. This, combined with route mapping in the dungeons, proves that the designers are at long last listening to the demands of the players, who have been screaming for this kind of utility for years.

All-in-all, ***Legends of Valour*** looks exceptionally good. The graphics are brilliant, pushing the ST to its limits, and the open-ended aspect of the game gives role-players their first-ever chance to develop their characters through both its words and actions. ***Legends*** is scheduled for a November release, and will be reviewed in ST Review soon.

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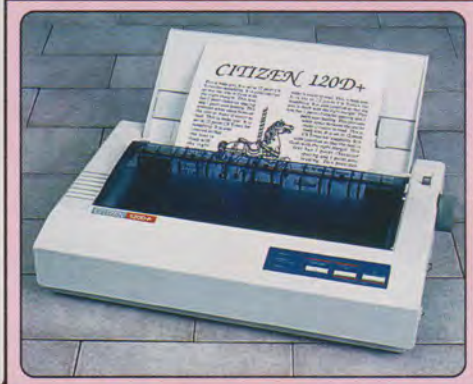

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Characters between asterix's show special requirements:
M = Mono Res *C* = Colour Res
D = Double Sided Disk *X* = 1 Meg Ram
S = Not STE or Rainbow TOS

DESK ACCESSORIES & UTILITIES

301 Dir printer, RAMdisks, .ACC loader etc.
302 Clock, calculator,free Ram checker, Breakout .ACCs
328 Calendar, clock, Disk Manager .ACCs
303 Fast copier. Hex Dump. Degas to Neo, Koala to Degas & Neo to Degas. Seced disk editor.
337 Utils for Hard Disks
333 Printer drivers for 1ST Word, Degas & Gemfont.
385 68000 assembler, an Address/ Mailing list.
824 PICSWITCH 7 changes all graphic res. Hi-Res/Colour emulators. BBOOT, drive. SWITCHER, 2 progs in memory.
517 STE BOOTUP, med res bootup.
886 DIY DEMO, Make scrolling demos featuring a title screen & scrolling message.
836 ARC file compiler. BICLOCK to set time/date. KEYEDIT reconfigure the keyboard to print any characters. MONOEMU v5.0.
881 100% IBM compatible formatter. ARC SHELL v1.91. DC clock. STARGEM. VIRUS DESTRUCTION UTILITY V2.1.
854 The DATABASE CONSTRUCTION SET. Spellchecker. DEFSEL.
379 GULAM CLI shell/Command Line interpreter.
383 DRFLOPPY, a disk sector editor.
829 Various progs for printing all kinds of labels.*M*
882 CHK 2.3 Everything you need to know about a disk. DCOPY v3.02. Desktop Manager v2.1.
585 ANTIDOTE, Superb Virus killer.
857 DISKMECH is a powerful disk analyser/ archiver/editor. CPANEL vastly improved control panel.
561 GENESIS is a Fractal landscape generator. FORMAT 10. VKILLER . PCOMMAND. XUTILS.
884 AMC GDOS, GDOS replacement. ARC SHELL v1.98. DISK TOOLBOX v2.03.
387 BOOTGEN, maintain disk sectors Boot.
584 MOUSE TRICKS, a .ACC extensive control over mouse movement & menu style.
883 MX-2 v2.3 a multi-tasking & multi-user enviroment.*D*
834 DOUBLE CLICK format v3.03 9/10 sectors, 80/82 tracks.
842 DEC edit clone, Disk engineer v3.01.
382 Archive utilities, including ARC, EXSQUZ, SQUEEZE, STPACK, STSQ etc
324 ADDRESS LOG, limited address book & label printer, Disk catalogger.
844 WPTOOLS, written for 1ST word, inc, alarm clock, Printer selection, Wordcount, Relabel(Disk volume), Format, Undelete file.
747 TURTLE, A HARD disk backup utility.
728 HEADSTART V1.1, excellent program that allows you to autoboot programs, inc. GEM from an Autofolder. +
730 GEMINI Desktop replacement. All English version of a replacement Desktop simular to NEODesk. *SX*.
384 On this disk is a prog called LABEL EXPERT good label maker. Preset formats for floppy disks, video, & cassette tapes. *M*.
843 AUTOGEM autoboots any Gem program when booting. XFORMAT2 extended formatter & VC Spreadsheet.
745 STAR LC-10 UTILITIES. PRINTER config utils for 1st WORD & 1st WORD PLUS. TRANSPORT 90 download alternative character sets. STARACC.ACC control the usual functions of the Star LC-10 multi-font printer.
746 SUPER VKILLER detects 5 different viruses,recognises 7 anti-viruses & 133 other types of boot sector.
573 Files to assist in graphic print-outs for 24 pin Dot Matrix printers.
572 GEM PLUS. This is a great variant of Neodesk.
749 RECOVER is a file recovery utility.
438 REAL TIME MULTI-TASKING OPERATING SYSTEM. *D*
439 GEMDOS USERS GUIDE.
572 GEM PLUS. This is a great variant of Neodesk. Alter desktop icons, design your own, and do the same with progs.
381 dbMAN tutorial. Visicalc style spreadsheet. Disk formatter. Multi-purpose file print util. Mramdisk. acc. +
882 CHK 2.3 - Disk checker. Desktop Manager v2.1. IBM MODIFIER alters DS Atari disks so that an IBM can read them.+
885 PROMOUSE self-adjusting mouse accelerator. RATTRAP locks out menus. TURBODOS. MAXIDISK reset proof Ramdisk.
333 Printer drivers for use in progs such as 1ST Word, Degas & Gemfont.
444 XCONTROL: ATARI's latest TT control panel accessory for all STs.
448 CYPHER: Encodes pics so that they cannot be loaded into normal art packages. LITTLE GREEN SELECTOR.
454 MEMFILE 2.0: Memory & powerful disk editor.
457 HD SCAN 1.6: Comprehensive shareware hard drive manager.
481 STDCAT V4.0. disk catalogger
623 SUPERBOOT V7.0

GRAPHIC, FONT AND ART/DRAWING DISKS

323 Great digitised pictures. 5 from Raiders of the Lost Arc & 12 from Ghostbusters.
375 FONTEDIT v3.0, Editor & loaders for Ram & downloaded fonts. not STE.
577 PALART. art program with full docs.*C*
390 E-PLAN CAD, stock list facility.*M*
391 COLUMBIA, drawing prog part 3D. Studio (*X*) menu driven drawing package. Both German.
397 DOODLE, art package, Mono & Colour versions.
578 ST GRAPH. comprehensive graph program
376 FONTS2, Screen & desktop fonts. Columbia, Devoll, Hudson, Saturn, Spokane,. Thames & Universal Roman.
876 DELUXE FONTMASTER v2.0 *MD*
757 CANVAS, a great art package, fully supports STE.
879 PALETTE MASTER, art package, great features, up to 512 colours.*C*
388 Pics, Mona Lisa, Moon, ST keyboard, Planet, Yoohoo, Saturn & others.
803 Amiga & Macpaint pic files plus PICSWITCH which can read Neo, Degas, etc.
808 FRACKTAL is a fractal drawing program from Germany. Fractal landscape prog.
850 FONTKIT 3.31 An excellent font program. * D *
880 COLOURBURST 3000 v0.2, add different colours to pictures from other packages.*CX*
888 ANI-ST, HIGHLY PROFESSIONAL quality animation system.
396 MASTERPAINT, drawing package, Mon & Col. LITTLE PAINTER.
394 PICWORKS, utility for enlarging, reformatting & manipulating pics.*M*
809 AIM v3.21, An image processing package.*DX*
540 PUBLIC PAINTER An excellent German art package.*M*
820 SNOOPY, 25 cartoons with display prog.*C*
577 PALART. Excellent art program with full docs on disk. Excellent features. *C*
556 VAN GOUGH(Dutch)& STUDIO2(*X*), art packages.*C*
401 LOW COST CAD 6.20. PD demo version.
442 ST CAD v2.1, med/high res CAD package.
393 THE ARTIST, drawing package*M*
469 JILCAD, a good shareware CAD package. Lots of features (2D)Add-ons available. *XD*
471 FONTS, Calamus PD fonts from USA. Advert, Babyteth, Barnum, Carolina, Casual, Celtic, Chancery Bold, Chancery + others *D*
785 MOVIE CONSTRUCTOR: animate objects & text. FACE ANIMATOR.*M*
775 FULL SCREEN CONSTRUCTION KIT V1.9.*DX*

CLIP ART

521 Various human figures, different cartoons, Titles & more.
522 Sports figures of high quality, July 4th logos.
523 Children's whimsical & elaborate fonts & Christmas card images.
524 Food images, Atari ST & Fuji logo etc. Disks, Computers, Robots & other Sci-Fi.
525 Faces & Eyes, concentrating upon expressions, Horses, Building plan symbols & some different Christmas images.
526 American trademarks from the 1920's & 1930's. Some very atmospheric images.
527 Various borders, tints etc. High arty & cartoons - Picasso to small fluffy animals.
732 IMGSHOW, IMGVIEW show progs.Various fruit, over 20 arrows & Access symbol.
733 Occasional Clips, Various Characters etc,
734 Loads more fruit, Vegetables.
735 Herbs & Kitchen parts.
736 More Arrows, Artdeco, Breakfast, cups/glasses & more kitchen parts.
738 Humorous clips plus the individual letters A-Z.
737 Babies, Boys & girls.
739 More Girls, Scrolls & Occasional clips.
740 More Artdeco, Baby Boy & Girl
741 More Varied Humorous clips.

WORDPROCESSING & DESKTOP PUBLISHING

727A-F TEX, 6 DISK PACK, Includes TEX the document processor & typesetting system.*DM*
835 1ST WORD Wordprocessor. Fully GEM based professional wordprocessor.
831 (SS)/841(DS) EASY TEXT v1.2 Fully working Desk Top Publishing demo.
482 ST WRITER ELITE,4.1. Latest version. additional utils on disk 363.
758 STPAGE is a super fast editor. It produces pure ASCII files for writing programs.
450 REVENGE V2.01: Super intelligent document displayer.
877 ST FOLDING EDITOR v0.9A Shareware 'folding' text editor which allows sections, sub-sections & paragraphs to be made invisible so the structure of the document can be clear.

GAMES DISKS

All games are in colour unless otherwise stated.
343 SHERLOCK, A cluedo game Sherlock. El Bozo City, Sci-Fi text adventure. Around The World In 80 Days, collect 17 souvenirs in order to succeed.* M *
317 Battleships, Checkers, Maze, Megaroids (Mono), Pool.
547 ADDICTION, card game patience, graphics *S*.
863 SLEUTH, A CLEUDO style whodunnit. LOCATION CRISSLEFRIDGE.
891 SUPERBREAKOUT, 40 brick types.*M*
894 DEEPLAIR, 2 player underwater shoot' em up.
554 NAPOLEON, conqueror Europe.*M*
352 Eamon is an Adventure game writing write your own games. Comes with 5 games.
856 CHESSNUT, is a 3D chess game. SPOOKS is a great PACMAN clone. BELLUM INTERNECINUM, Galaxian clone. *S*
781 MAKE A BREAK, A great Trivia game leaning heavily towards Snooker rules.
761 EMPIRE BUILDER property development, LOST TREASURE. JUMPSTER.
762 RUSH, move bricks to create a way out for the ball.*S*
763 BUMPER JACK superb platform game.*S*
764 YAHTZY. *S*
545 UPSTART shoot the cherries *S*.
765 COMPANION shoot'em up in outer space.
548 ENGLAND TEAM MANAGER. Football team management. MILEGAME.
566 DIE ALIEN BLOB, shoot the coloured balls & avoid the laser cannons.
344 Baller, arcade castle & cannons game graphic adv.*M*
309 ADVENTURE WRITING SYSTEM.
766 TUNNEL VISION, maze game. PATIENCE card game.
552 BERMUDA RACE 2.
562 INVASION. adventure set on a huge spaceship.
544 AYATOLLA, Defeat the terrorists.*S*
868 ROBOTZ, highly addictive & very playable game. 40 levels.
847 FRUIT MACHINE fruit machine simulator.
546 SLIDER, good quality puzzle game with 3 levels.*S*
507 SKULDUGGERY runs in Mono & Colour. 100 levels.
508 ATOMS is a mentally challenging game for 2-4 players. KILLERCHESS. AMMOTRACK race & blast'em game.*S*
565 SKIDPAN, motor racing game.*S*
529 STOCKMARKET, Wheel & deal. GALACTIC WARRIORS, a good shoot-'em-up.
346 ADVENTURE Colossal Cave type Adventure.
855 EXPLODE outwit an opponent on a Chessboard type layout. BALLZONE an Arcanoid clone. JITTERBUG, try & rescue aliens.
528 FLOYD THE DROID, an ultra fast shoot'em-up.
530 AIR WARRIOR, a Flight Simulator.
531 COMPUTER PINBALL. DEVASTATOR & a DARTS game.
576 TALESPIN. The wolf and the 7 kids.
513 FUZZBALL a great platform game
515 SHIPWRECK, educational maths with graphics. *S*
512 ZOG a great blasting game. SUPER SENSORI.
514 A DUDLEY DILEMMA, great adventure game. You guide a student at Harvard University in an attempt to get a Diploma.
518 Cribbage, Othello, Yahatzee, Wheel of Fortune
519 WIZZARD'S LAIR complete text & graphic adventure.
780 UNDER BERKWOOD massive graphic adventure
782 NAVAL BATTLE A good version of the good old Battleships
705 HARRIS WENT SKING, *S*
783 CHESS,MONOPOLY, BACKGAMMON, LASER CHESS
709 CORE WARD, You have to write rival programs.
710 VIRUS, a game with great graphics and sound.*S*
403 FLYOVER, a bombing raid game.
404 GLOB, you collect cherry cakes while avoiding pursuers.
405 BOXING CHAMP,*S*
406 TRACKER, drive your tracker through enemy.
407 OVERLANDER fly in & destroy the enemy base.
408 CHANCE, destroy the Archons
409 ESCAPE FORM THE TOMB OF RA, collect jewels to prolong your life, find the secret passsages.
410 MUTANT, A reactor goes out of control. Workers mutate. You must get to the end cavern and destroy it.
411 KEY TO ATLANTIS, excellent scrolling shoot'em up.
412 GRAND PRIX, good fast racing game.*S*
413 MARS MAZE, good platform game.*S*
414 STEEL, blast everything in sight.
415 BATTLE COMMAND, Missile Command clone.
416 WHEEL OF FORTUNE, good quiz base on TV program.
417 HEDGEHOG, FROGGER clone.*S*
418 THE NAME GAME, based upon the Sun puzzle.
419 CHESS, a very good implementation.
421 COMPANY, business simulation.
422 MOTORBIKE, drive your bike around the track.
423 TARK, great text adventure. D & D type.
467 BATTLE FOR THE THRONE, a role playing adv.
449 LLAMATRON: A great Shareware game.
451 VIDEO POKER, Las Vegas poker playing machine.
452 DERRICK THE DROID: A great mix of platform, Shoot'em up & puzzle game.
772 PORK I: A parody of the Infocom adventure ZORK I.
784 PORK II: Another send up of the ZORK series.
773 MORIA: A fantasy role playing game.*D*
779 PICTURE CONCENTRATION: Children's recognition & matching game
788 ROLL 'N' NUDGE:fruit machine game.
789 DUNGEON!: Multi choice fantasy adventure with some humour.
778 C ADVENTURE TOOL KIT.
712 ASYLUM: Text adventure set in an asylum.
713 HACKMAN: 509 level Pacman clone.
714 ELVEN CRYSTALS II
716 FROGGY: Frogger arcade classic.
460 NETHACK THE ADVENTURE, text based adv.
461 STARMAZE: Guide your craft around the various levels.
896 A NIGHT ON THE TOWN text graphic adv.
897 TILE GAME, rearrange letters. *S*
899 SOKO, 50 levels. *S*
596 QUIZ CONSTRUCTION KIT. STOS TRACKER FILESPY 1.2 *D*
597 MEGAROIDS, RIPCORD, SPACEWARE, BUGS.
491 BATTLE SCAPE game
600 FRUSTRATION & CRISS CROSS; ZPOKER.*M*
601 BACKGAMMON & POKER SQUARED. *M*
605 OZONE arcade game
606 FLY ROBIN & SANTAS WORKSHOP
607 PENGUIN, shareware.
608 CROCODILES PASTIMES.
609 ARTHUR OF THE BRITTONS; Adv/ Arc game.
620 KOZMIC 2; *XD*
625 REVENGE OF THE MUTANT CAMELS.
628 MR DICE, KLATRIX
629 SPACE INVADERS
631 BLOCKADE
617 INFILTRATION, game
799 BOMB OUT BROTHERS, Compilation disk No.1. MAD MOLE, great version of the Boulderdash, LASER RACE, defeat enemy laser cars in the arena.. ALIEN BLOCKADE, based upon the arcade game QIX.
563 DARKNESS IS FOREVER, adventure full graphics in Mono or text only in Colour.
354 Diamond Miner is a multi-screen game with a built in games editor. Snafu & a card game called Skat.* M *
402 JITTERBUG,The ship contains rare alien lifeforms which you have to catch.
326 Arcade games including Warzone, Daleks, Haunted House & Mousemess.
547 ADDICTION, a great version of the card game patience, great graphics (not STE).
329 Checkers, The Original Adventure, Pool & a fun Chess game. * M *
891 SUPERBREAKOUT, There are over 40 brick types all with special features.*M*
351 HACK 1, a Dungeons & Dragons text adventure with graphic maps.
511 SCANNER a checkers game, SPACEWAR, 2 space ships battle it out
707 CENTAURI, a Horizontal scrolling shoot 'em up.
786 SIMPLE DRAW V3.4: A great art package that works in medium & high Res. Degas compatible samples included. (Docs foreign)
787 HYPERTEXT: Shareware prog suitable for the production of very professional documents. Simular to a DTP but more flexible, pics & text easily mixed on screen *MD*
458 TETRIS:Classic 2D tumbling blocks game that's highly addictive(MONO). PUZZLEMANIA: Multi level mayhem, highly addictive puzzle game wher you have to plan your way around the maze, turn on the generator and trap the droids.(COL)

PROGRAMMING/LANGUAGE DISKS

574 6800 ASSEMBLER.
702 STOS SOUND FX CREATOR.
325 XLISP v1.7, Experimental object orientated language. Includes masses of docs.
828 STOS RUN, is a utility that enables you to run STOS programs without STOS.
312, 313 & 314, C LANGUAGE DISKS 1, 2 & 3 of Elementary C, 3 disks.
305 CPM EMULATOR. This is a CPM-8 version 2.0.
306 CPM UTILITIES, for 305.
334 C COMPILER, boot up utility, ram disk, & CLI.
813 PROGRAMMING EDITORS, CONTEXT v2, PRO-ED & P-EDIT.
839 Nigel Smith's ST 68000 Ref. pop up guide v2.0
887 SOZOBON C, the best PD C compiler with full K & R compiler support.*D*
759 Sprite designer & editor.
440 C TUTORIAL, superb disk manual that provides an excellent intro into C programming.
474 GNU GDB, capable source level debugger. SZ ADB, debugger for SOZOBON C.*D*
475 MKRSC, GEM resource construction utility.
476 MODPAS, Pascal Compiler with CLI.*D*
711 6800 M/C course by Mark Van Der Boer.

Introducing Atari ST Machine Code – Book & Disk £20.00 (+ 2 free PD)
Easy Text Plus (Full Version) £18.50.
Easy Text Professional – in stock! Plus 5 free PD disks of your choice £39.95

COMMUNICATIONS DISKS

364 PACK-ET-TERM v3.3A, radio package. YARP split screen RTTY terminal prog.
316 XMODEM, MODEM 7, a multiple file transfer utility, transfer a whole disk in one go. Plenty of docs.
366 UNITERM v2.0a, docs inc. Superb comms package. Tektogem transformer prog
752 VANTERM 3.71 & 3.8 PD Communications package. FLYING START, standard RS232 comms pack.
616 HagTerm Elite V3.3

APPLICATIONS SPREADSHEETS, DATABASES ETC.

826 DATABASE 1, GEM driven database.
827 ST SHEET spreadsheet *C*
830 HOME ACCOUNTS v1.0 Pullin. 43 different statements in memory. 100 entries per statement *C* NOT STE.
755 PERSONAL DTB is a database for storing your names & addresses & creating labels or personalise mail shots.
873 B/STAT v2.01, graphing & statistical analysis program.*DX*
874 OPUS v2.2, GEM based spreadsheet & charting program.*DX*
543 WG DATA, no frills high quality database.
537 DOUBLE SENTRY, fully working accounts package, no VAT.
541 INVENTORY PRO V2.0 is a fully featured stock control system.
432 TCOS a great database that allows data to be structured in a tree arrangement.
433 ZAPCARD, card type database. BANKER, keep track of your bank account.
434 SHEET V2, fully featured spreadsheet.
455 NAMENET:An excellent database, Med & High res.

MUSIC

875 COMPOSER, A music creation program.
570 CZ SOUNDS, transfer data from CZ101 to ST midi.
720 MUSIC WRITER, create music on screen.
721A-B -SOUNDTRACKER PLAYER & MODULES. ZOWEE, TIMDEMO, SHORT, AUSIFOOT, GRILLED MUSIC1, MUSIC2, DELTA2, ECSTASY, HOWDEEP, BALLJAM, TOXOPLAS, IVORY, MADNESS, OPERATE.* 2 Disks ! !
550 Digital sound demo, Degas & Neo graphics. Quartet demo, 4 channel sequencer.*C*
870 SINGING CALIFORNIAN RAISONS 4 piece group of singing raisons *DX*.
536 CASIO CZ SOUNDS & EDITOR,2 synthesizer editors/librarian programs.
871 CHANNEL SCOPE, an early version of Midi Monitor. HIGH-TECH TRIVIA v1.2 +
753 XBIOS Music Construction Kit.
754 PERCUSSAMAN is a 4 track, 16 instrument, digitally synthesised sequencer.
750 SOUNDTRACKER PLAYER & MODULES. D_DREAD1, D_DREAD2, PAT_MIX, RVB_DEMO, SPREAD.
767 MICHAEL JACKSON BAD, digitised song & graphics.
718 TWB DIGI-SYNTH 4: 9 MOD files with player.Shadow Warriors Intro, Stress, Show, Alf, Biomix, Grandmix, Harleymix, Horney, Sanxion.*D*
598 MIDI v 2.0 Med/High res Midi monitor. EX800v2 DATA LIBRARIAN, Med/High res. TUNING 2 v2.
486 MIDI editors, AKAI XE8 & YAMAHA DX100.
487 Daybreak Step Time Sequencer v.3.
466 GHETTOBLASTER, a simple but enjoyable demo designer. LOW RES.
477 MFP, music design package from Yugoslavia. Comprehensive package in English *DX*

EDUCATIONAL

859 REBUS WRITER, This is a superb program, design & print Rebuses.
341 BARNYARD the animals from memory.*C*
555 WELCOME TO CHEMISTRY V2.8.*S*
564 CHUNNEL, A Fench to English game & vice-versa *SC*
539 TYPING TUTOR(2) A very good package, full documentation.
557 SPELLING MADE EASY, The computer speaks the word & you then type in the correct spelling.
558 MATHS MADE EASY, great prog with speech synthesis.
872 KIDGRAPH, painting prog. which lets children. KIDMUSIC, KIDPIANO, KIDPOTATO.*C*
559 KIDPUBLISHER, DTP for the young.
424 DOT2DOT, join the dots to make pics. Also create your own. KIDCOLOUR, introduces colours to young children. KIDSHAPE.
426 THE BODY SHOP, introduces the locations of all main bones & organs.
427 SOLAR SYSTEM GEOGRAPHY.
428 GEOGRAPHY TUTOR, a great shareware package. Covers Europe.
429 ZOO MAKER, you are asked questions & the computer tries to guess the animal.
430 ME FIRST, put pics in the correct order. BUTTERFLY IN THE PARK, find the hidden boxes in the park.

GENERAL

575 CONSTELLATIONS. A comprehensive Astronomers disk *M*
701 PLANETARIUM, statistics on various planets/moons.
802 THE PLANETS, slide show around the planets, plenty of pics, facts & figures.*D*
549 POOLS PREDICTION SYSTEM.
462 AUTOROUTE DEMO, covers just the south of England.
832 ST TOUR, guided tour of your ST.
833 YOUR SECOND ATARI MANUAL A 250 kbyte text file of the book.
776 ST TECHNICAL MANUAL: ATARI GEMDOS REFERENCE MANUAL, ENGINEERING HARDWARE SPECIFICATION OF THE ATARI ST, A HITCH-HIKERS GUIDE TO THE BIOS and PROFESSIONAL GEM.
437 BUSINESS LETTERS, 100 business style letters in ASCII code.
717 ASSISTANT CHEF 1: 42 great recipes.
478 ASTRO 22: a professional Astrology program.

DEMO's

586 LIFE'S A BITCH, demo by The Lost Boys *D*
587 STEVE'S COMP' DEMO NO.1 Bat Demo, Micromix II, Fuji Bonk.*D*
588 STEVE'S COMP' DEMO NO.2 Megabang, Robomix, & Magiceye.*D*
589 STEVE'S COMP' DEMO NO.3 Micromix, Stingray & Ballit.*D*
568 THE DEFINITIVE DEMO, by The Lost Boys.*D*
569 SLATATANIC CULT, Music Bemo I & Music Demo II*D*
591 ASTERIX DEMO, digital sound & pics.
593 TRANSYLVANIA DEMO by The Lost Boys *D*
542 REFLEX DEMO, THE OPPOSITION *D*
542 REFLEX DEMO, THE OPPOSITION *D*
599 COUNTERPOINT DEMO
479 CUDDLY DEMOS *D* Not STE
488 POV23, TCB Sound tracker, Micromix 3, TLT & Yello demos.

NEW ADDITIONS

610 FASTBASE; great DTB
611 INTRO CREATOR, spectacular effects *D*
615 COMPACT OFFICE MANAGEMENT PROG comprehensive*D*
626 EDSYNTH V1.2.
627 MASTER DOODLE.
632 EZ ART, Low Res
633 DAYLIGHT ROBBERY
634 MAGASNAP,FASTRAM(ACC)
636 TENNIS.
639 MOUNTAIN, LSYSTEM.fractals
643 ACCOMPANIST 2.4.
644 ARTPRINT *M*
653 FCHECKER V3 & FLISTER AUTOLOADER.
658 ARCSHELL 2.05.
665 ARMOURLYTE game
666 JAMES desktop butler.
667 GRAV, rotate & thrust game.
674 TOP DOG, Greyhound form prediction system.
100 BLACK DAWN, Adventure with very nice graphics. Destroy the Lord Darn of the Narcollisis. *D*
101 FORMFINDER V2.1, loads of features, limited to 10 runners per race & no print option. RIP IT UP, over 30 questions to teach & test your knowledge on road signs & symbols. Both shareware.
102 MASTERTIME, Educational Shareware program to teach the time with Digital & Analogue clock options. The difficulty level is graduated.
103 RAMWORLD, 3D World & Object creator & viewer released as shareware.
104 COLLECT, vertical and horizontal scrolling game. Battle the robots & obstacles.
107 SHOWMEM V1.5, runs a .prg or .acc on all STs & TTs. A technical utility for utilising & minimising memory usage. N_SYSCOM1.1, use to see Gemdos, Bios, Xbios & Gem actions your computer is doing on screen. + much more.
110 HPCHROME, This program prints Degas & Neo pics in colour on HP Deskjet printers.
111 SLAYER. The game is not like a standard text adventure whatsoever. It has over 650 locations, no verb input and over 50 different endings. Docs on disk *X*
112 PLOTTING, full instructions on the disk. Comes with a construction option. Eliminate blocks by hitting them with the same marked block.
115 1st WORD .IMG FILES. 188 *.img files. A great selection. Something for everyone, courtesy of L. G. Robinson.
117 UTILITIES by A. Sutton. The Address book v1, address database with print options, search etc, load & edit printer drivers. BRAKCHCK, is a short bracket checking programming aid. DENCRYPT, disk encrypter for encrypting "personnel" files. .FORMATER, formatter with a fast load format option, simple but effective. SATTRIB, a short file attribute modifier which can be used to hide or protect files.
119 GAMEPACK 2 from Erictronics, AWARI, Ancient African game played with 14 bowls & 36 beads. NIBBLERS, Eat away at the biscuit, the person who eats the last piece is the loser. QUEEN (*S*) Based on the moves of the Queen in chess, player verses computer. SOLITAIRE, simple variant. TRAFFIC JAM, Control London's traffic lights.
140 BLAT, great 3 in a row falling block game (STE only).
141 MYSTIC WELL, Dungeonmaster type adv.
142 MINDLOCK, Trivia quiz game, various subjects STE only. *X*
143 ANARCHY ACADEMY, great 3D shareware game.
144 T-GAME, good falling block Tetris type game.
145 GRANDAD & THE QUEST FOR THE HOLEY VEST, the ultimate adventure? *DX*
159 VIOLENCE!, vertical scrolling shoot 'em up in the Xenon mould.
160 CYBERSNAKE, variant of the classic 'snake game'.
161 UNKULJAN UNDERWORLD, large fantasy text adventure. *X*
162 PABLO & THE GLOD OF MONTEZUMA, Fast action boulderdash type game.
163 NUTHOUSE, Massive demo with 18 minutes of digital music. *D*
164 SO WHAT, 17 great demo's from the Care Bears.
165 OVERDRIVE, Plasma fractals etc, demo by Aggression.
166 ALCHEMIE JR, Great Swiss multi-window/multi-task sequencer. *X*
167 SAGROTAN, great virus killer. *X*
168 CRACK ART, Excellent German art package. *D*
169 STAC, The ST Adventure Creator, now PD.
170 JC MEGA MENU, Menu creator with smart fonts, music, program selector etc.
171 JIGGERS, a strategy game of coloured squares to make you think hard.
109 THE BRADNESS CROSSWORD GENERATOR V2.3, find word matches in part-completed crosswords or design crosswords. (Shareware).
123 ACCOUNTABILITY V1.0, general purpose fully featured, multi-financial accounts program. *D*
124 ATOMIX, complete shareware game. The aim of the game is to place atoms of varying energies on a 7 * 7 grid.
126 ART TUTOR. A step by step on screen guide to what is needed to become an artist. *CD*
129 THE FINANCIER v1.1s, keep track of your finances, all your credit cards & bank accounts etc. Has a powerful search capability. Shareware.
130 GODEL, an intelligent maths program, Shareware. It can manipulate arithmetic & algebraic expressions etc.
132 RIFF, "The Ultimate Backing Track Creator." Create your own backing tracks. Various parameters can be selected & set with full midi support, with documentation on disk. *DM*
133 OOH CRICKEY WHAT A SCORCHER, demo by The Lost Boys. *D*
134 *.MOD files including player. BLUESONG, EG, HARR, KEFRENSO, MAGNUM, NONAME, REV, WILD_INT & WOTRACK. *D*
180 COMBAT, You parachute into open desert and must shoot down the enemy missiles. (Shareware).
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185 TURBO 407, fast reset proof Ram disk & Printer buffer. RESOURCE TO C CONVERTER. *.ACC LOADER & REMINDER, + more.
186 NAMENET v2.0, a personal DTB designed for ease of use & the minimum of setting up by the end user. Shareware. *D*
189 THE MYSTERIOUS REALM, complete shareware adventure game, featuring full colour graphics.
190 D_REZ, is an Asteroids type game brought up to date with good sound & graphics. Shareware.
191 UNTOUCHABLES SOURCE DISK, No. 1 demo disk. *D*
192 SIMPIG, Manage a pig farm & grow a big healthy stock.
1002 ALBASE V1.00, A good database with help, a screen designer and good other features. Plenty of docs on disk.
1007 SPIDER SPELL, spelling program for kids. Based upon hangman.
1008 TURRETS, Thrust clone. Destroy the enemy while manoeuvering your spacecraft from level to level.
1009 PURE LOGIC V1.1 a logic puzzle game based upon Boolean Algebra. It's a fun & educational program.
1013 NEWGEN V4.14, Shareware geneology package with an 18 entry limit. An unlimited version is available from the author.
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1017 CHAIN REACTION, is a game of strategy & luck. Shareware.
1019 HARDCORE DANCEFLOOR, demo by the Wild Boys, *DX*
1020 FANTASIA, an interactive demo. STE only. *DX*
1021 QUIZ CONSTRUCTION KIT, design & participate in multiple choice quizzes. Shareware.
1027 KAOSDESK 2.01, great new icons & an option to design your own with this alternative desktop.
1033 TESERAE, A colour Tetris clone.
1037 DRACHEN, a 2500 year old game from China. 144 pieces on the playing board. The aim of the game is to remove all the pieces. Highly addictive. *M*
1038 STDCAT V5.0B. Comprehensive disk cataloguer. Shareware.
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COMPUTER CONNECTIONS

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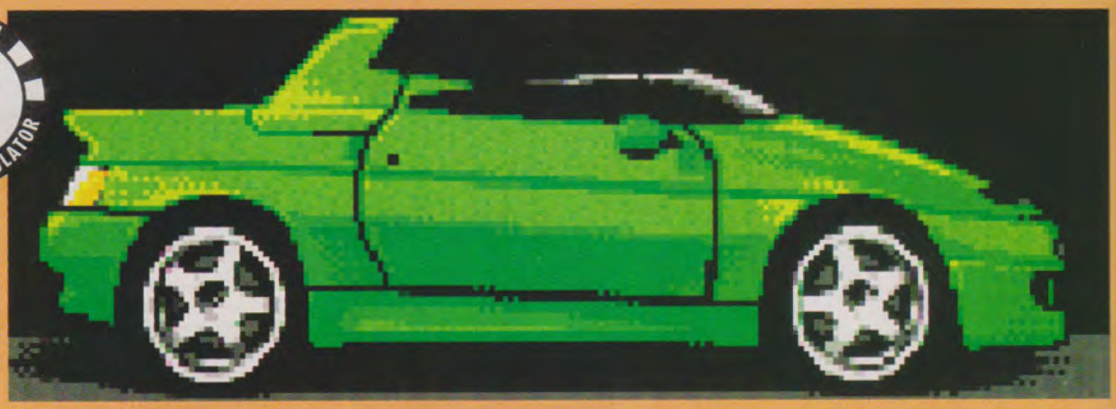
Following a respray and a complete refit, Gremlin has wheeled out its third Lotus racing game. Tony Kaye test drives it. . .



LOTUS III

THE ULTIMATE CHALLENGE

The Lotus Elan SE car is the slowest of the three, but still a lot better than an XR3i.

Two-player split-screen mode. This is where the game really excel. Here we go for some fast action!

In the beginning, there was ***Lotus Esprit Turbo Challenge***. It featured circuit racing and a split screen for two players. Then came ***Lotus Turbo Challenge II***, a race through stages and against the clock. Now ***Lotus III, The Ultimate Challenge*** has arrived, a new incarnation combining the two earlier games into one.

This new game (which was originally called ***The Final Challenge*** until Lotus objected to anything about its cars being described as 'final') has a choice of circuit and stage racing, a new car and many other features.

RECS

The main new feature is RECS – the Race Environment Construction System. This is a new method of selecting a track. Instead of having to place bends and sections in to complete a track, which can take a long time, all you do is enter a series of letters and numbers. The RECS screen allows you to adjust each aspect of the track, background hills and difficulty of the circuit. You can adjust the length of each stage and by calling a friend with ***Lotus III***, they can instantly play the same level by typing in the code.

There are three cars for you to choose from. Of these, the Elan SE is the slowest of the three, followed by the M200 concept car which, we are told, will never go into production, while the fastest is the Esprit Turbo SE.

The selection screens show a rotating car, a side view, speed ratings, specifications and four interior shots of each car. This is followed by the now familiar track selection screen which features sound effects or a choice of six different tunes.

RACING ACTION

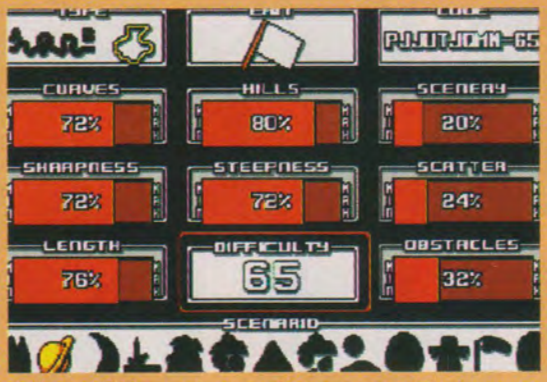
The racing action itself is adequate, although by no means over-exciting. There are some nice backdrops, but as with the earlier games, collision detection is its big downfall – all that happens is that the car slows down. I would have liked to see the

Virtually infinite choice of tracks and difficulty settings
Combines the best of Lotus I and II
RECS feature is easy to use and comprehensive

PROS AND CONS

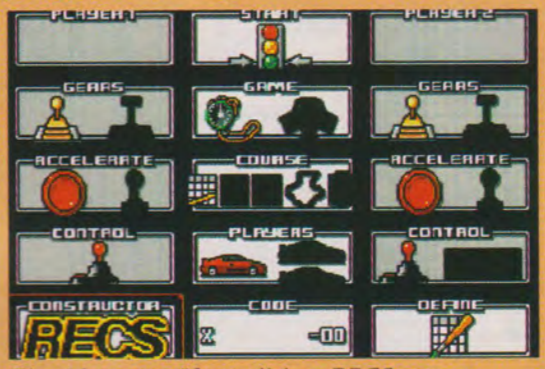
Tired format
Lack of collision detection
Cars appear to run backwards at times

RECS settings are all on maximum and the background is rain.



Adjust all the settings and create your ideal personalised challenge.

You're treated to some nice pictures while the track is loading.



The title screen. If you click on RECS you can enter the track editor.

"Interesting and challenging, but lacking in originality"

NAME: LOTUS III, THE ULTIMATE CHALLENGE
COMPANY: GREMLIN
CONTACT: 0742 753423

PRICE: £25.99
RELEASE DATE: NOW
MIN MEMORY: 0.5 MB

GRAPHICS	4
SOUND	4
VALUE FOR MONEY	5
PLAYABILITY	4

OVERALL 80%

car suffer damage, especially as you have to make pit stops for fuel on the longer races. Why not replace tyres or body panels at the same time? Talking about the pits, where are they? All that you get now is a sign telling you that you are refuelling!

BACKGROUNDS

There are some interesting new backgrounds in this new game, including Futuristic, which is probably the best one of them all.

Features include magnets that pull the car sideways (although Lotus cars are made of glass fibre!) and lasers that fire across the track. Curiously, though, under race conditions, the car appears to run backwards at times. There are 12 more backgrounds to choose from, offering a variety of conditions, amongst which are roadworks, fog, mountain ranges, night driving, snow, rain and motorway racing.

As with the earlier games, ***Lotus III*** comes into its own when there are two players. The split screen works well and there are some nice touches that will hold your attention. If you enjoy arcade racing games then this is definitely for you.

The now familiar CD player. Choose from engine noises or six different tunes.

Winner's laurels for first place, but this is only an easy level.

The blisteringly fast Esprit Turbo SE.

Some single-player race action in the futuristic zone.

RECS

With the Race Environment Construction Set each track can be tailor-made to your individual requirements and championships can be made up of as many user-defined tracks as you want. A code is generated for each new track so you can recall your favourites at any time.

Tracks can be laid out using 13 different scenery backgrounds and designated as an A to B type course or a circuit. Then, displayed as a percentage, you can set the curves, sharpness, length, hills, steepness, scenery, scatter and obstacles. Difficulty can be set from zero to 99.

INSIDE INFO

Lotus III was programmed by Shaun Southern from Magnetic Fields. While creating the new game, Shaun had a break from it for one afternoon and wrote a *Connect Four* type game. Shaun challenged the staff of Gremlin and bet them a pint that they couldn't manage to beat it in three attempts. He spent the rest of the day in the pub getting very drunk on the proceeds!

His next project is, as yet, undecided, although this will definitely be the last Lotus game. Shaun would like to write a shoot-'em-up game next.

The Project car, the M200, will be on display on the Gremlin stand at Gamesmaster Live, along with Nigel Mansell's World Championship winning Formula One Williams car. Gamesmaster Live takes place at the NEC on 4th to 6th December.

MATCH OF THE DAY

The ultimate football challenge or the ultimate overstatement? Tony Dillon checks out Zeppelin's latest

(Top) The main screen, with your diary on the left and the options on the right. (Left) Match day, and a stunning save from the unrealistic goalkeeper. Nice logo, though.

It had to be done in the end, didn't it? With football games still appearing thick and fast after so many years, someone finally had to release a ***Match Of The Day*** license. But why bother? After all, you've got to be scraping the bottom of the barrel if all you can get your hands on is the rights to a TV programme based on the sport you're basing the game on. Still, there's no need to openly cynical, is there? Who knows, it might turn out to be OK. Then again...

Match Of The Day is a very basic managerial simulation. In fact, it's dated, limited and prehistoric in operation. As manager of the fourth division team of your choice (and what a choice), you have to somehow try to take this hopeless bunch to the top of the first division and get them to win the FA Cup. For your next trick, you'll probably rise from the grave.

STANDARD FORMULA

As with so many others, the game is played from your diary. You have a match every Saturday, and have to find ways to keep yourself occupied for the rest of the week. The main display is split into two halves, with your diary on the left and a bank of options on the right. By clicking and dragging the icons over to your diary, you can set all the appointments necessary to lead your team to success. Want to improve their skills? Make an appointment with the trainer. Fancy a new keeper? Call the scout and get him searching. All's well so far.

This is where it all goes horribly wrong. Once you've set an appointment and moved the date on to meet it, you realise how little you can actually do. Going to see the trainer, you are shown a list of the players, with a set of bars to show how good they are. At the bottom you are told how many training points you have. Assigning a training point to one statistic of one player for three days raises their expertise in that field a little. By that field, I mean their attacking, defending or midfielding skills.

MISSED OPPORTUNITIES

So we go to the match. For this you can either see a bunch of highlights, or just have the score. After watching the highlights a couple of times, you'd probably be better off with the score. The pitch is displayed vertically over three screens, with the view flipping between them as the ball travels. The highlights are generally attacks on goal, the person with the ball at the start of the highlight usually being the one that's going to shoot. This is when things get really unrealistic. Rather than use complex algorithms to display a football match that looks like the real thing, players from both teams run around like headless chickens, making no attempt at all to even try to tackle, and the attacker makes a bee line for the goal. A waste of a good idea.

In these enlightened days, when fans of this genre are so used to a million statistics and even more options, ***Match Of The Day*** is so primitive, it becomes dull and repetitive within the first five minutes. So much seems to be based on luck and random numbers that there is no point to developing strategies, and a strategy game without strategy is a blank disk in my book.

Some nice presentation
Simple interface

PROS AND CONS

No strategy involved
Abysmal graphics
Theme tune is appalling

ANY COMMENTS, JIMMY?

Before, during and after each match, the action cuts back to the ***Match Of The Day*** studio, where a badly drawn Jimmy Hill and an even worse Desmond Lineham sit and analyse the progress of the match.

By analyse, I mean that they say things like, "Well, Wrexham have got off to a great start here today. If they keep scoring more goals than Scarborough, then they'll win." In that respect, at least, it's a very good and accurate simulation of the real thing.

"Random strategy title with no depth, subtlety or playability"

NAME: MATCH OF THE DAY
COMPANY: ZEPPELIN PREMIER
CONTACT: 091 385 7755

PRICE: £25.99
RELEASE DATE: Out Now
MIN MEMORY : N/A

GRAPHICS	○○✪✪✪
SOUND	○✪✪✪✪
VALUE FOR MONEY	○✪✪✪✪
PLAYABILITY	○✪✪✪✪

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TINY SKWEEKS

Tony Dillon, self-confessed babyphobe, finds out for himself how trying a babysitter's life can be...

If you didn't already know, Skweek was the star of an old(ish) platform romp. Nothing more than a ball of fluff with eyes, it was hard to imagine him becoming a daddy, but he did, and that's the focus of this game – the tiny skweeks.

TRYING HARD

The plot behind this game is without doubt one of the most desperate I have ever come across. The tiny skweeks have escaped and, being hyperactive children, have fallen to earth to cause havoc and confusion wherever they go. In time-honoured, science-fiction cop-out style, you just happen to have a Tiny Skweek Controller, which by a remarkable twist of fate lets you guide the skweeks to small pods on the ground, upon which they will fall asleep. The controller isn't 100 per cent successful, though. In fact, all you can do with it is tell the skweeks to walk in one of the four main compass directions, and off they go. They won't stop until they bump into an obstacle, such as a wall or fellow skweek, and you can't turn them until they stop.

As you can probably guess, this rather mild storyline hides a very simple puzzle game, which is based loosely on the sliding block puzzles that you used to get as a kid if you were lucky enough to have a birthday party at McDonalds. This time around, there are 101 different levels to work through!

Each level takes up approximately two thirds of the screen, and contains one or more coloured tiny skweeks and the equivalent amount of coloured bases. In the early levels, the objective is simple. Select the red skweek, push left to watch him walk straight onto the pod, and then press the fire button to finish the level.

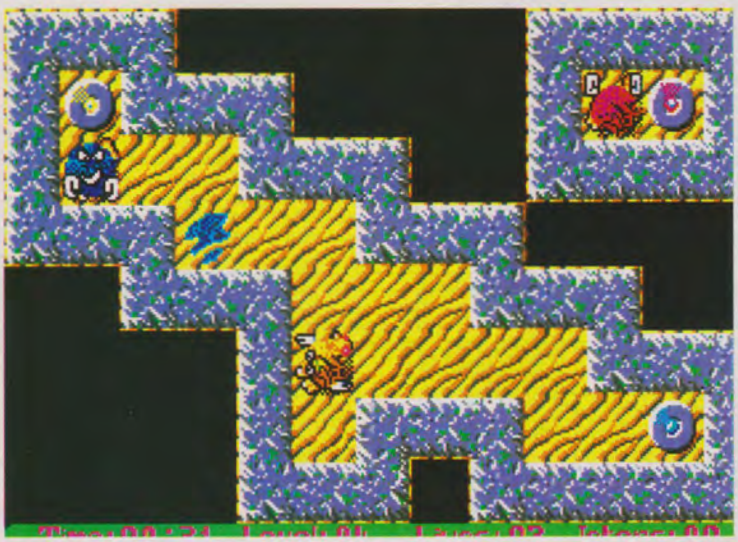
As the game progresses, however, you'll have to start using a little ingenuity as you send skweeks into corners to act as blocks for other skweeks to walk around, or start avoiding hazards on the levels, such as arrows that turn you in mid-run, or trapdoors which open at the wrong moments, sending you flying back to the start.

FRIEND OR FOE?

101 is no small amount, so there's a handy password system built into the game. Every time you reach a new level, you are given a new password. With this in mind, it shouldn't be too difficult to finish the game in a few attempts (my first took me to level 24 before I lost a life!).

Surely, if you're going to have a cute game, you might as well have some cute graphics, right? Well, not necessarily, if this game is anything to go by. Thanks to the heavy use of black keylines around everything, most of the actions of the skweeks are obscured. For example, if you leave them doing nothing for a while, they start messing about. Quite what they do, I'm not too sure, as at this point the sprites turn into a mess of pixels!

Tiny Skweeks has been developed on the principle that "the best ideas are the simple ones". This game is very simple, and that's its biggest fault. There isn't enough challenge or even participation to make anyone want to play through all those levels. Not a winner.



This is a good example of how you need to use skweeks to block other skweeks.

As things get a little hotter, arrows on the floor direct your fluffy creatures around. These are sometimes useful, but more often not.

Loads of levels
Music plays throughout
Some nice pics between levels

PROS AND CONS

Tedious gameplay
In-game graphics are very poor
Poor joystick response

"Repetitive puzzle slog that lacks imagination"

NAME: TINY SKWEEKS
COMPANY: LORICIELS/DI
CONTACT: 0276 684959

PRICE: £25.99
RELEASE DATE: MARCH
MIN MEMORY : 0.5 MB

GRAPHICS	●●○○○
SOUND	●○○○○
VALUE FOR MONEY	●○○○○
PLAYABILITY	●●○○○

OVERALL 56%

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*Does not include 1st Word

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VFM

With Christmas just around the corner, Alan Dykes checks out a selection of seasonal savers. . .

INDIANA JONES AND THE LAST CRUSADE

KIXX XL • £14.99 • 021 625 3366

ATARI ST BUDGET BUY

IN BRIEF: Have you ever watched an Indiana Jones film and dreamed of taking part in the same sort of daring adventures? Could you match your wits against the evil machinations of Hitler's minions? Here's your chance to find out. ***The Last Crusade*** was Indiana Jones' final big screen adventure (although a new one is now available on computer only – ***The Fate Of Atlantis***) and it featured the inimitable Sean Connery as Indiana's ageing but still adventurous father. Indy's Dad, Henry Jones, has been searching for the Holy Grail, 'The Fountain Of Youth', for decades, but just as it looks like he's coming close to finding it he gets kidnapped. Indy must rescue his Dad and recover the grail before it falls into the hands of the agents of the Third Reich, who want to use it to make Hitler immortal.

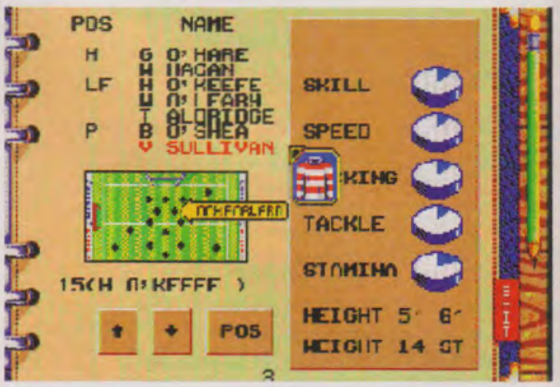
ST REVIEW COMMENT: "This is a big game for a budget title, which might explain its launch on Kixx's new XL label. XL has been designed to get games like this out on budget faster than they normally would, but at a higher price – £14.99 in this case. Don't be discouraged by the price though, this game is actually still worth paying £25.99 for, especially for fans of Indy or of large graphic adventures. The Last Crusade is a very in-depth adventure, but controlling your character (you can switch control from Indy to Henry at certain stages) is simple thanks to a user friendly command menu. The story remains true to the movie so watching it will help with some of the puzzles. The rest must be solved using cunning, powers of observation and some helpful hints and tips contained in Henry Jones' grail diary. This is a superb game with good sprites and animation and heaps of atmosphere.

✪✪✪✪✪

WORLD RUGBY

ZEPPELIN • £7.99 • 091 385 7755

IN BRIEF: Soccer management simulations are, in my opinion, extremely overrated. They're usually all the same and, unless you're a complete fanatic with a train spotter's addiction to numbers and detail they are, with only a few exceptions, highly forgettable. And now rugby. I suppose this isn't as worn out a theme as soccer management, but surely the idea's exactly the same. Well, yes and no. Rugby being a more enjoyable game (floods of complaining letters), this does actually grab your attention for a while.



World Rugby is basically an unofficial Rugby World Cup game where you (yawn) manage a national side to the top using your skills as a coach and trainer. Actually all the sides re-created in this game are surprisingly well documented. The names and positions look right and I'll wager that the rest of the info isn't too far off the mark either. Each player is measured in terms of skill, speed, kicking, tackling and stamina. Weight and height measurements are also given. This information is presented using pie charts and you select a side based on it. Once you've actually played a game an anonymous TV presenter appears on screen to tell you of your success or failure.

ST REVIEW COMMENT: "***World Rugby*** doesn't offer anything new on the management front, but it does give this jaded formula a small facelift. In general the graphics are of a good standard with amusing match highlights and easy-to-follow menus. It's quite difficult to put together a good team and even more difficult to get to the top, so fans of rugby and management games will be well satisfied.

✪✪

SUPER MONACO GP

KIXX • £7.99 • 021 625 3311

IN BRIEF: Super Monaco GP is a Formula One racing game based on the highly successful Sega coin-op of the same name. The game has a standard 'over the steering wheel' view of the race track with clear instruments describing gear position, revs and current speed plus overhead indicators of your position and a chronometer to time yourself.

To get into each race you'll need to qualify, then compete against all the other drivers in the game on multi-lane tracks around famous Grand Prix circuits. When you win or qualify you are congratulated by a swimming costume clad beauty. Even if you crash or fail to win anything she'll still appear with a placard proclaiming your inadequacy.

ST REVIEW COMMENT: "Good scrolling and graphics keep this coin-op conversion very close to the original.

The action is fast and the corners are sharp; with an option on three different (ever faster) gearboxes and sensitive controls, Super Monaco GP will keep you busy – very busy. You even get to see the front wheels of your car moving about! What a bonus.

✪✪✪

WORLD CHAMPIONSHIP BOXING MANAGER

GBH • £7.99 • 0742 753 423

IN BRIEF: It's not often that two different departures on the standard management simulation theme appear at the same time, but it's happened this month. ***World Championship Boxing Manager*** is, without doubt, one of the best presented and most intriguing management simulators ever seen on the ST. No stone has been left unturned in an attempt to get us as close as possible to the reality of managing, not just one boxer, but a whole 'stable' in the hope that one of them will become a Superstar. This is not an easy task when you're up against 17 other computer controlled managers but then the will to succeed has to be present in the manager as well as his boxers.

The first part of the game involves office duties; you set up deals, monitor progress and generally use your cunning. In this section you must also train your young pugilists in the gym. Be warned, however, that over-training can cause injury and be as damaging as too little training, so you must plan carefully.

The second part takes place at a fight itself where you get a chance to take part, offering your fighter guidance, swabbing up all his blood and generally showing off.

ST REVIEW COMMENT: "You'll need to have a lot of time on your hands to play and enjoy ***World Championship Boxing Manager***. It's rather big, very in-depth and superbly planned and executed as far as simulations go. However, an interest in boxing is a definite prerequisite. If you don't know the basics of the sport you'll soon get lost."

★★★★

JAHANGIR KHAN SQUASH

GBH • £7.99 • 0742 753 423

IN BRIEF: When Krisalis originally launched ***Jahangir Khan Squash*** he was the most successful squash player ever and his various records still haven't been broken. Likewise, this game still hasn't been bettered as an arcade-style squash simulator. ***Jahangir Khan Squash*** allows two-player matches, club tournaments and participation in a 32-player World Championship knockout tournament, all of which can be selected by clicking icons on the start-up screen. There are also options which allow you to check player stats and change ball type (which governs speed – blue balls are fastest, yellow slowest).

ST REVIEW COMMENT: "You can literally feel the power of the ball as it bounces off the court walls. The game has a semi-3D view which means that getting around the court and actually hitting the ball will take a bit of practice. But once you've got the hang of it, you're guaranteed lots of enjoyable matches as you work your way up through the lengthy league tables. Although the sprites are small and, unlike most equivalent tennis games, lacking in colour and personality this is more than made up for by sheer speed. However, since this is what squash is all about, I have to say that ***Jahangir Khan Squash*** hits the mark.

★★★★

SUPERCARS II

ATARI ST REVIEW BUDGET BUY

GBH • £7.99 • 0742 753 423

IN BRIEF: Regular readers will know that ***Supercars*** received an ST Review Budget Buy accolade two months ago, and is a classic game in a genre that has all but died out in recent years – the overhead racer.

Time and technology have caught up with this sort of game, so fans will be pleased to see the second instalment in the ***Supercars*** saga now re-launched. However be wary, if you're not particularly enamoured with this game format ***Supercars II*** isn't sufficiently different from its predecessor to warrant a second purchase. Once again the plot involves taking part in fast, furious and deadly races to win money and championship titles.

Supercars differs from any other racing game in that the action is viewed from vertically above and you have a variety of weapons at hand which you can use to blow the opposition sky high. Once you start to win races you'll get prize money, then you have this at your disposal to purchase car and weapon upgrades to enable you to win more advanced races and so on.

ST REVIEW COMMENT: "***Supercars II*** looks very similar to its predecessor but has been tweaked here and there to provide a more exciting game. Although it's more polished than the original it really hasn't got as much charm (though this might just be nostalgia speaking, of course).

However, good graphics, upgrades and playability make ***Supercars II*** an excellent game and if you're considering purchasing only one game in the series then (leaving nostalgia aside) I would have to recommend this one."

★★★★★

SWITCHBLADE II

GBH • £7.99 • 0742 753 423

IN BRIEF: Just in case you don't remember, ***Switchblade*** was a tremendously successful arcade-style blast-'em-up which involved a mystic Samurai hero, Hiro, whacking the minions of chaos on his planet, Cyberworld, with a few sharp moves and some heavy weapons.

Unfortunately, the inhabitants of Cyberworld weren't as appreciative of Hiro's talents as the discerning computer games purchasing public and soon turned their backs on him and his mighty Blade Warriors.

Just as Cyberworld was lulled into a false sense of security chaos returned, so the council of village elders (or something like that) have once again entrusted the fate of the world to a descendant of Hiro.

Switchblade II is much more of a shoot-'em-up than its swordplay predecessor was. Hiro Junior is equipped with a bionic arm which is capable of housing all manner of destructive weapons as well as a close-range knife, while new weapons upgrades can be obtained in shops at the end of each level.

ST REVIEW COMMENT: "***Switchblade II*** is a standard but nevertheless classic platform shoot-'em-up. There are five levels of complete mayhem with tons of evil enemies, power ups, hidden bonus levels and rooms to wade through before your final conflict with the dark lord, Havoc. If you're still hooked on this sort of game then you'll be happy parting with £7.99 for ***Switchblade II***.

✪✪✪✪

MAGIC WORLDS

SILMARILS • £25.99 • 071 490 2944

IN BRIEF: ***Magic Worlds*** is a collection of graphic fantasy strategy games from Silmarils and Palace. It combines everything that most fans of this genre demand: dragons, rulers, sorcerers, armies and kingdoms. Most importantly, they all demand considerable use of the grey matter.

In ***Storm Master*** you oversee all aspects of a kingdom at war for centuries with its neighbours. To succeed you must defeat your enemies in battle. You must control your kingdom's religion, military matters, food production, entertainment, military intelligence, and weld your people and army into a formidable force.

Crystals Of Arboria sets you the task of saving your land from an evil lord of chaos. You must gather a band of merry men and you can troop around no less than 16,000 locations, using brute force, magic and intelligence to defeat your enemy, Morgoth.

Dragon's Breath is a completely different affair; you breed and nurture dragons to do your dirty work throughout a troubled kingdom. The object of the game is not to save anyone but to make yourself immortal by using your dragons to collect pieces of a lost talisman.

ST REVIEW COMMENT: "If you're used to fast and furious action you may find these games a little trying, but if you're a genuine role-player with a passion for sword and sorcery you'll probably find the wait worth it. ***Storm Master*** is without doubt the best. Besides the pure strategy mode, there is also a limited, arcade-style 'combat mode' which breaks the monotony. It's a big and largely satisfying game.

Next in line is ***Crystals Of Arboria*** with lots of characters and locations and reasonably good graphics. The collection is, unfortunately, let down by ***Dragon's Breath*** which is definitely one for hardened fanatics only. The storyline drags the game out far too much and the loading system means that almost every time you select a new option the screen goes dead and you have to wait an age for something to happen.

Magic Worlds is a worthwhile investment for role-playing and fantasy fans. Others should be wary.

✪✪✪

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AN INTERNATIONAL MANAGEMENT GAME

Yet another England manager has learnt the hard way that controlling an international squad is a very different ballgame to club management. Every match is a cup-tie and every team -selection and result is picked apart by a voracious press. The pressure to succeed is incredible.

Soccer Supremo puts you in charge of a European national squad preparing for the European Nations Cup qualifiers. You have an initial four year contract that may be extended to six or eight years, or reduced to two, as the results dictate. You'll be expected to qualify for the Finals, then put up a show against the best European teams, but this is just preparation for the big one:The World Cup!

Customisation. The game will allow you to take the European nation of your choice and you will be allocated an initial squad of 16 players. You can introduce a further 34 players, making 50 in all, whose names and skills (but not levels) You can define yourself. These players are introduced gradually as you discover the weaknesses in your squad and also to create the balance of skills that match your style of play. The original 16 players can be defined in the same way using the EDIT program (free with the game) if you wish as well as the teams that will make up the opposition.

In the traditional number-juggling soccer management game wing-backs, sweepers, formations, styles, tactics are, at best, cosmetic, at worst , meaningless. The unique match simulation at the heart of Soccer Supremo restores all these and more, allowing genuine control over team performance. In addition to the visual feedback on your team, this match allows substitions, tactical positional changes and workrate instructionsto individual players which then influence the flow of the match. The increased realism and control transforms the supreme, but childish, gameplay of the traditional game into a compulsive simulation..

3D, 22 MAN MATCH DISPLAY

Continuous display of:
OV'LL/ATT/MID/DEF POSSESSION STATS.
IND PLAYER ACTIVITY STATS.
PLAYER FATIGUE /FITNESS STATS.
STATE-OF-THE-GAME INFORMATION
PLAYER-WITH-THE-BALL INFORMATION

IN MATCH TACTICAL MOVES

SUBSTITUTIONS
POSITIONAL CHANGES
OVERALL WORKRATE
IND. PLAYER WORKRATE

HEAD COACH V3

"From my point of view , the game has kept me sitting up at nights through holidays and weekends for up to 12 hours at a stretch, with miniscule breaks for food and other necessities.....It is a game I have no hesistation in recommending to anyone with even the slightest interest in American Football" ATARI USER

Headcoach V3 has been described as "the best game ever put onto a computer". It is the complete American Football game, a multi season epic with the very best strategic elements of the real thing. You will call the plays, devise the gameplans and develop the team.

Use the first season (2 pre-season games, 16 regular season games, and the play-offs) to discover your 45 man squad of players. Then exploit the college draft to improve the team and expand your game play to beat the very best the NFL can throw at you.

56 Screens of stats are available tohelp you to judge your players and team performances.

Players will age and teams will fade (a player will last about 6 seasons), but you will stay and rebuild....

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Head Coach works with ALL STs/monitors
SS and DIV 1 require colour monitor/TV.

PD ZONE

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THE MAZE

L.A.P.D. • DISK NO: G.217 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: "No you moron – that piece goes there!". "It's so simple!" What would we do without our weekly ***Crystal Maze*** shouting match?

The Maze is based around Channel 4's TV puzzler, with just enough changes to avoid any lawsuits. The crystals have been replaced by keys, the idea being to solve four of the five puzzles in each level before moving on to the next. Complete all of the stages and enter The Maze for a final test.

Although the puzzles appear to have been created especially for the game's 3D style, the interface is a bit quirky and not really suited to this type of 'precision' game.

ST REVIEW COMMENT: "***The Maze*** is an excellent idea, but a few annoying glitches in the execution spoil what could have been a great game – still well worth a look though."

✪✪✪

The Maze – gulp! There are five puzzles per lobby and oodles of stages to get through– and you thought that The Crystal Maze was difficult?

The control system may be frustrating at first, but persevere and Grav 2 turns into one of the best shareware games of the year!

GRAV 2

L.A.P.D. • DISK NO: G.221 • £2.00 • MEMORY: 0.5MB • SHAREWARE

ATARI ST ESSENTIAL BUY

IN BRIEF: "Many years ago, a being known only as 'The Enemy' appeared in our universe from parts unknown. It tainted the hearts of men, and from these men a new empire arose to challenge our society..." A game needs to be good to support a story-line that corny. Fortunately, ***Grav 2*** is!

The idea is to move your spaceship along the twisting terrain, taking out gun emplacements and other assorted nasties. This would be simple if the game used any normal control method, but ***Grav 2*** doesn't. Instead, the ***Asteroids***-style 'left, right and thrust' approach is used, which makes the game difficult but infinitely more satisfying when you manage to master it.

ST REVIEW COMMENT: "***Grav 2*** is ***Oids*** reincarnate. The 'twist 'n thrust' control system is perfect, the sound effects are great and the playability is spot-on."

✪✪✪✪✪

CIRCUITRY

GOODMAN ENTERPRISES • DISK NO: GD1645 • £2.75 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: Robot Alpha 5 has gone stark raving mad and has spread Professor Small's life's work all over the Science Centre! You take on the role of the plump professor in search of the missing circuits.

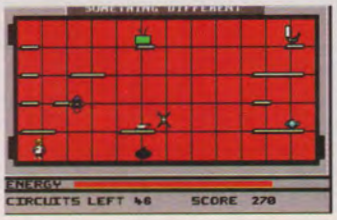
Circuitry is set in the four-storey Science Centre, each storey containing several screens of action; you must progress through the screens in search of the green circuit boards.

Circuitry's main problem is Professor Small's control system - he has about as much fluidity as a bowl of triple strength Big Soup, – which is a shame because the rest of the game is as smooth as silk.

ST REVIEW COMMENT: "***Circuitry*** is fun to play and similar in many ways to ***Impossible Mission***. The professor's manoeuvrability could do with a tweak, but it doesn't detract too much from a good game!"

✪✪✪✪

Four circuit boards down, 46 to go – things are looking up!



TUG OF WAR

L.A.P.D. • DISK NO: G.218 • £2.00 • MEMORY: 0.5MB • PUBLIC DOMAIN

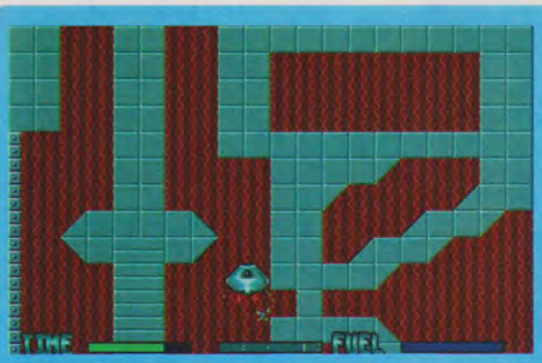
IN BRIEF: Remember Spectrum sports games and the days when, if your joystick made it through one frenzied game of ***HyperSports***, you considered yourself lucky? Well, prepare your trusty Konix for another few weeks of joystick waggling hell at the hands of ***Tug of War***!

The game is for two players only and sees you pitted against your mate at the other end of a rope. Wiggle the joystick left and right to move your man towards victory. The characters are matchstick-type men, but expertly animated. The number of rounds can be selected and you can create a league of up to 10 players.

ST REVIEW COMMENT: "***Tug of War*** has a certain charm. It's not likely to be a long-lasting member of your game collection, but it's worth a few goes."

✪✪✪✪

Invite all the neighbours round and show them why all those hours playing Spectrum HyperSports were worth it!



I think that's what they call cutting it fine (but well worth it for the scratchy noise!). My kingdom for a set of brakes!

HEADLONG

THE ST CLUB • DISK NO: GBU.106 • £2.95 • MEMORY: 0.5MB • LICENCEWARE

IN BRIEF: Having stolen a spaceship, you race at breakneck speed towards freedom, with only one problem – no brakes!

Headlong is fast! The scenery races towards you at a terrific speed and you need to be in exactly the right position to negotiate some of the tighter curves. The game is based on a time limit as opposed to lives and after each crash you are sent back to a restart point. To make things even more difficult, the restart point changes every time!

In terms of presentation, Headlong rates highly. Sound effects consist of the usual chip explosion sounds and there's a nice scrapey noise as your ship glances the wall. This is definitely not for gamers with a fragile disposition!

ST REVIEW COMMENT: "If you like games of this genre, then ***Headlong*** is very good – it's fast, slick and challenging. But unless you've been endowed with more than your fair share of reflexes, you probably ought to sit this one out."

✪✪✪✪

LOGIC PROBLEMS

L.A.P.D. • DISK NO: L.19 • £2.50 • MEMORY: 0.5MB • LICENCEWARE

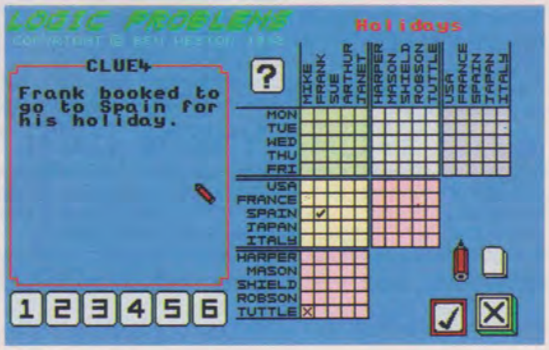
IN BRIEF: On top of being Mr Spock's best attribute, logical thinking is essential for any good programmer. Here to help you brush up your skills is ***Logic Problems***.

The layout is exactly the same as you will find in most puzzle magazines – there are five sets of cryptic clues along the left, with a grid to help you eliminate the 'impossibles' with a cross. Of course, the advantage of using your ST is that any mistakes can be deleted easily. When you think you've filled in the grid correctly, just click the right mouse button and begin to dream up excuses for not having got it right.

Five puzzles are included in the package and the full set of solutions can be found in the documentation (in case you're the sort of person who pays £2.50 for 60 pence worth of puzzles and then cheats!).

ST REVIEW COMMENT: "***Logic Puzzles*** is well written, functional and aimed at the right audience, but £2.50 for five puzzles seems a bit on the steep side."

✪✪✪✪



Use the six clues and grid to deduce who went where on holiday – if you can figure out how to work this grid!

TOP 10 GAMES

1 GRAV 2 • L.A.P.D. • DISK NO: G.221 • £2.00 • MEMORY: 0.5MB • SHAREWARE

Skilfully crafted ***Oids*** variant that sets new standards in shareware games. Tracker tunes and sampled sound are spread liberally throughout and the tricky control system is easy to pick up, but hard to master.

2 MATCH IT • FLOPPYSHOP • DISK NO: BU.90 • MEMORY: 0.5MB • LICENCEWARE

This beautifully presented ***Shanghai*** style game was written by a member of top demo crew, The Delta Force. The graphics are blisteringly colourful and the sound incredible. Slightly tweaked gameplay makes it a bit more appealing than the original.

3 BLOX • NEW AGE PDL • DISK NO: ORDER BY NAME • £1.50 • MEMORY: 0.5MB • SHAREWARE

Just another ***Tetris*** clone? What a load of ***Blox***! The simple rectangle has been replaced by a hexagon, and with bricks appearing from all six sides things can get pretty hectic! Build rings around the central brick to progress to the next level. Addictive in the extreme!

4 VIOLENCE • WARPZONE PDL • DISK NO: GAME.79 • £1.50 • MEMORY: 0.5MB • SHAREWARE

Classic, ***Xenon***-style shoot-'em-up. Make your way up the vertically scrolling landscape leaving a path of devastation in your wake (on the way to the galactic peace convention). Great gameplay and graphics make ***Violence*** one of the better shareware blasters available anywhere.

5 BLACK DAWN • COMPUTER CONNECTIONS • DISK NO: 100 • £1.60 • MEMORY: 0.5MB • PUBLIC DOMAIN

You scramble from the tangled wreckage of your ship to find yourself on a strange new planet. A nicely done ***STAC*** adventure with well-drawn graphics and a good storyline, but be warned – it certainly isn't easy!

6 TETRIS • COMPUTER CONNECTIONS • DISK NO: 458 • £1.60 • MEMORY: 0.5MB • MONO ONLY • PUBLIC DOMAIN

A ***Tetris*** clone for all you mono owners out there. The game is more or less identical to the original and plays well. No bells, no whistles, but plonk your monitor on your lap, turn down the brightness until you have to squint and you could really be playing a Gameboy (as if you wanted to)!

7 G-ORB • FLOPPYSHOP • DISK NO: BUD.59C • £2.95 • MEMORY: 0.5MB • LICENCEWARE

A jolly jaunt around the universe aboard a space orb – use your 'cosmic hammer' to flick the switches and open the door to the next stage. The difficulty is set at the right level and the effects are excellent for a ***STOS*** game.

8 A WINTER'S TALE • FLOPPYSHOP • DISK NO: BUD.61C • £2.95 • MEMORY: 0.5MB • LICENCEWARE

Dizzy Lizzy is back in true 1992 style! The graphics remain as cartoon-like as ever and this time we find our hero in a winter wonderland. A code system is now used to select a start level and makes the game far more playable.

9 TENNIS • COSMIC PDL • DISK NO: 128 • £1.95 • MEMORY: 0.5MB • PUBLIC DOMAIN

Hardly ***Pro Tour***, but ***Tennis*** is easy to play and actually quite addictive once you get used to the controls. Two-player action adds to the appeal. In any case, it's worth picking up for the comical animation!

10 FLOYD THE DROID • COMPUTER CONNECTIONS • DISK NO:528 • £1.60 • MEMORY: 0.5MB • PUBLIC DOMAIN

This is a frantic shoot-'em-up in the ***Llamatron*** mould. Wiggle the joystick while holding the fire button and just hope for the best.

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THE ATOMIK PACKER

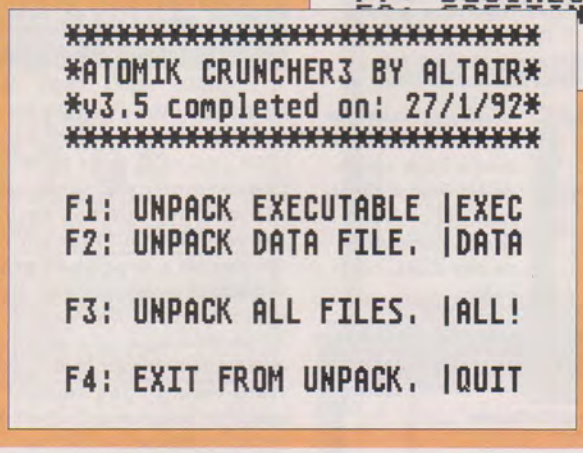
ATARI ST ESSENTIAL BUY

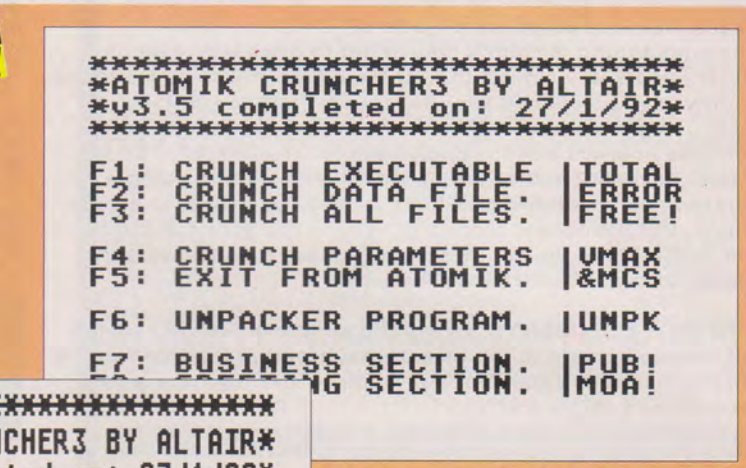
FLOPPYSHOP • DISK NO: UTL.3226 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: Isn't it incredible how, no matter how much storage you have, you always need that extra space? Now help is at hand from ***The Atomik Packe***r. Don't dismiss this one as "just another packer", because it just blows the rest away! As you would expect, it will pack and unpack your program files, but it will also crunch your data files and still let you use them from within almost any application. It does this by hooking into the operating system and depacking the files without telling the calling program – very nifty indeed! Of course, there are exceptions – Degas picture files, for example, fall foul, but when you consider what the program is doing, it's amazing just how successful it is!

ST REVIEW COMMENT: "There's not a lot to pick and choose between most packers, but ***Atomik***'s auto-decrunch program puts it head and shoulders above the crowd."

★★★★★





The Atomik Packer lets you crunch files to a fraction of their original size and still use them from within most applications!

Atomik is hardly pretty, but the compression rate is excellent and the program runs in all three ST resolutions.

SIRCWARE VIRUS PROTECTOR

FLOPPYSHOP • DISK NO: UTL.3321 • £2.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: If you don't want to catch a virus, what do you do? Go and get a vaccination of course! And this is the very principle that ***The Sircware Virus Protector*** brings to your ST. Pop the little program into your AUTO folder and your ST can safely use disks riddled with the Ghost virus without a chance of getting infected!

At present the only virus against which Sircware specifically protects is Ghost (which doesn't do too much damage anyway), but the programmer promises to improve on this. Those who register will receive a version that also handles the nasty Goblin virus.

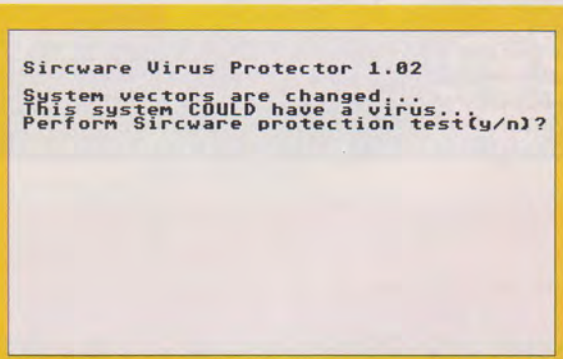
A 'tester' program is supplied to determine whether Sircware can deal with your infection and the program can be run from the AUTO folder, as a desk accessory or double-clicked from the desktop.

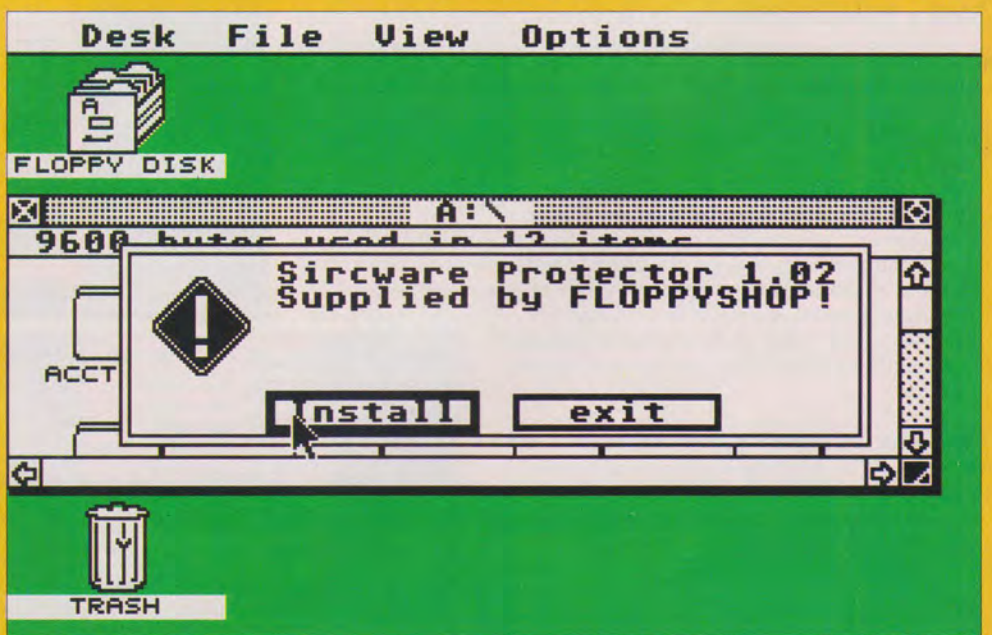
ST REVIEW COMMENT: "What a terrific idea! If the programmer keeps his promise and improves the program to include other more virulent strains, the serious virus threat could become a thing of the past!"

★★★★

Copy Sircware to your AUTO and wave goodbye to the Ghost virus threat forever!

Let's just make sure that everything is up and running properly... OK, am I really Ghost virus free?





ALICE 1.42

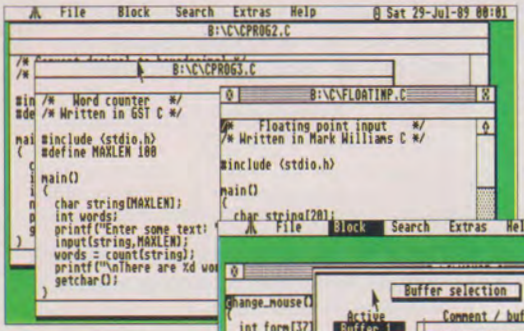
RIVERDENE PDL • DISK NO: 1022ST • £1.50 • MEMORY: 0.5MB • SHAREWARE

IN BRIEF: ***Alice*** is a text editor designed for working with C source code. At a push it could probably be used for other languages, but why complicate matters?

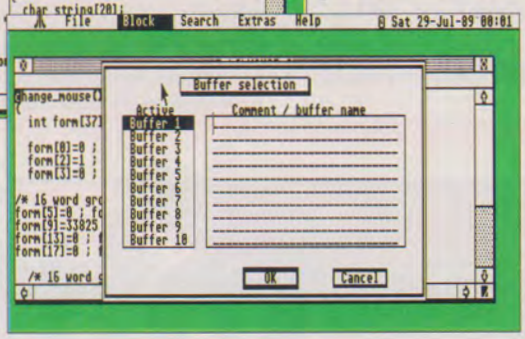
The whole thing is child's play to get to grips with and, in fact, is remarkably similar to ***First Word Plus*** in places! Up to six windows can be opened simultaneously and the scrolling is quick, using the cursors. The block handling is superb – as it should be in any C editor – and caters for an almighty 10 buffers! Keyboard equivalents are available for every single operation, so you don't even have to break your flow to access a menu. Unfortunately, there's no way to run your compiler from within ***Alice***, so you have to quit every time you test the program! Maybe ***MultiTOS*** will help?

ST REVIEW COMMENT: "Sweet and simple, ***Alice*** does its job well. Not being able to run an external program from within the editor is a serious omission, but if you're running from a hard disk it's not a major problem."

✪✪✪



With provision for up to six windows and a huge range of keyboard shortcuts, Alice is the ideal companion to any PD C compiler.

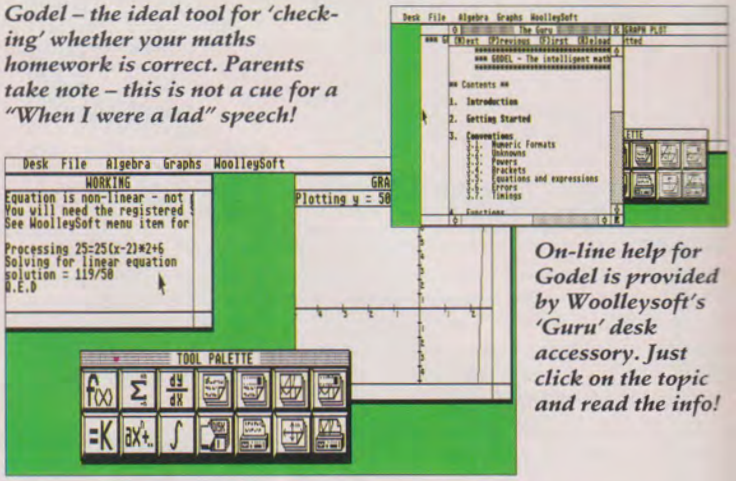


Alice puts 10 copy buffers at your fingertips, making sure that any careless mistakes can be easily rectified!

GODEL

GOODMAN ENTERPRISES • DISK NO: GD 1646 • £2.75 • MEMORY: 0.5MB • SHAREWARE

Godel – the ideal tool for 'checking' whether your maths homework is correct. Parents take note – this is not a cue for a "When I were a lad" speech!



On-line help for Godel is provided by Woolleysoft's 'Guru' desk accessory. Just click on the topic and read the info!

IN BRIEF: Wouldn't it be nice to know for sure that the answers to your maths homework were exactly right? Well, now you can! Just type the equation into ***Godel*** and let it beaver away and find the correct answer for you!

Of course, this has applications way beyond maths homework – it will handle most simple algebra and can even show the results as a graph! At present ***Godel*** will only handle equations with one unknown (x), but it can deal with the unsolvable variety, provided that you're willing to play with them a bit first.

The interface is very similar to that used by ***Fastbase***, being controlled via an icon 'panel' and a GEM menu bar. The shareware version has several limitations – for example, you can't see the 'workings' of an equation, but enough usability is provided to decide whether you want to splash out the £10 registration fee.

ST REVIEW COMMENT: "As far as the ST is concerned, ***Godel*** is unique. The GEM interface and tool panel make it extremely easy to use, but at present the equation handling is too limited for professional work."

✪✪✪✪

THE CHAOS DISK COMPACTOR

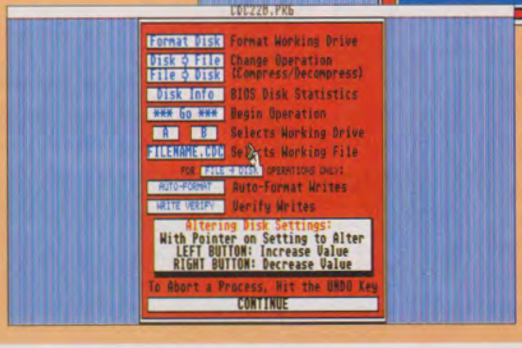
FLOPPYSHOP • DISK NO: UTL.394 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

IN BRIEF: ***The Chaos Disk Compactor*** takes any ST disk (including the Spectre and Aladin Mac emulator formats) and turns them into a single file. "Why bother if you can't run them?" you may ask. Well, for a start, you can back-up two ST disks and copy them to a single floppy! It also makes it possible to send 'problem disks', such as demos, via modem which will be good news for comms freaks.

The program is very easy to use – a couple of mouse clicks will see you through the whole thing – and seems to work with most disks providing that they're not copy protected. One handy feature is a built-in virus check – try to archive a disk with an executable boot-sector and bells and whistles will sound all over the place.

ST REVIEW COMMENT: "A neat little idea. ***CDC*** is ideal for backing-up those disks that you may never use again, but don't want to get rid of altogether, just in case. It can also come in handy for sending disks abroad – it certainly saves on postage!!"

✪✪✪✪



Reduce that sprawling disk collection by half with the help of the Chaos Disk Compactor – one click and it's all over!

As if it wasn't simple enough to use already, CDC comes complete with a help dialogue to explain the technical bits!

IMPORTANT ANNOUNCEMENT

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G029.....ENTOMED
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G037.....XWORD/COMPLIER
G043.....ATOMS
G048.....INT.CRICKET
G065.....ASTEROIDS
G066.....BLASTER
G070.....LASER CHESS

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A009.....PUBLIC PAINTER
A011.....TRENDY HENRY
A021.....QRT
A027.....ANI-ST

UTILITIES, ETC.

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U015.....SUPER V. KILLER
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D.341 DIMENSIO: Finnish party demo from the Condemned. D/S
D.347 COSMIC JAM: Good multi-vector demo from Imagina of Finland. D/S
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A. 1 ANI ST: Ex-commercial animation program (once cost £60.00 to buy!)
P. 24 MENU-MAKER: A French program that allows you to make your own menus with music, sprite and scrolling message. Excellent. D/S
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MAC ART

ATARI ST USER ESSENTIAL BUY

THE ST CLUB • DISK NO: SSM.05 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN • TIMEWORKS COMPATIBLE

IN BRIEF: The Apple Macintosh is the Big Daddy of DTP and consequently attracts some of the best PD clip art available. Fortunately some kind soul has taken the time to convert literally hundreds of these top-quality clips into Degas format for use on the ST.

The topics covered are diverse, but all are useful and very practical. Pictures depicting the seasons, office messages and Christmas characters are all included. A mixture of good quality hand-drawn and scanned art make up the collection.

MacPaint format uses a whole A4; Degas only supports the ST's screen size, which has meant splitting each Mac clip into two halves. All pictures are in PI3 format and can be imported into ***Timeworks*** in any resolution, but for any editing you are going to need a high-res monitor or emulator.

ST REVIEW COMMENT: "The main thing that strikes you about these disks (there are a few available) is their usability. Most are brilliantly drawn and are guaranteed to make your publication stand out from the crowd."

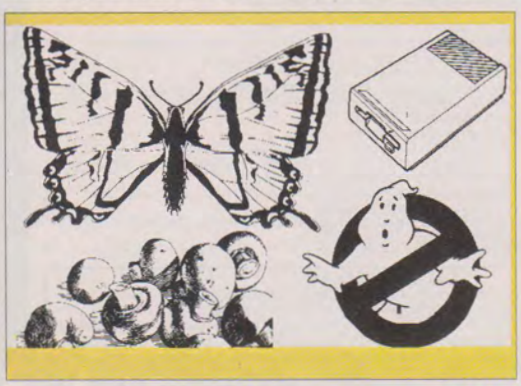
★★★★★

Mac Art was obviously designed in the USA. How do we know? No rain in the summer icon!

FRANK THOMPSON'S CLIP ART

FLOPPYSHOP • DISK NO: CLIP.25 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • TIMEWORKS COMPATIBLE

IN BRIEF: Scanners can be a mixed blessing. Whilst they provide realistic images, there's little doubt that they're also responsible for some of the dodgiest clip art on earth. Fortunately you won't have many problems with this disk.



A huge range of topics are covered by Frank Thompson and the quality of the scans is good.

TINY CLIP ART

NEW AGE PDL • DISK NO: CLIP.8 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • PAGESTREAM 2 COMPATIBLE

Tiny Clip Art – an icon for every occasion and millions more besides! Not brilliantly drawn, but fine at small sizes.

Unfortunately, Tiny's unusual picture format spells major hassle for users of DTP packages other than PageStream 2.

IN BRIEF: They say a picture can speak a thousand words, and that's even truer of icons. A good icon can draw the eye to a particular point on the page and also relieve the monotony of pages upon pages of nauseatingly boring text.

Tiny Clip Art consists of dozens of screens packed with icons of trademarks, computers and general subjects. Over 40 mini-pics, all of reasonable quality, are squeezed onto each screen. To fill up the spare space you get a few line-drawings of motorbikes and a couple of scans ported from the Macintosh.

The pictures are supplied in Tiny format, which is fine for compression purposes (squeezing over 50 pictures onto a single disk) but virtually no software can load the little blighters! ***TinyStuff*** is supplied to help you convert them into a more usable format, but once again, this takes time.

ST REVIEW COMMENT: "The only problem with this collection is the format used. ***PageStream 2*** is the only package to import Tiny pictures without a fuss; using the pictures with anything else is likely to involve a lot of work."

★★★

Frank Thompson's Clip Art is a collection of scanned pictures in the standard GEM 'IMG' format. A huge range of topics are covered, from ***Alice in Wonderland*** to tractors. All pictures are faced left and right, so you can just 'crop' them the way you need, without having to fiddle around with an art package. No slideshow is provided, so you'll have to wade through the pics in your DTP package – which is a daunting task when you consider that there are 71 on this disk alone!

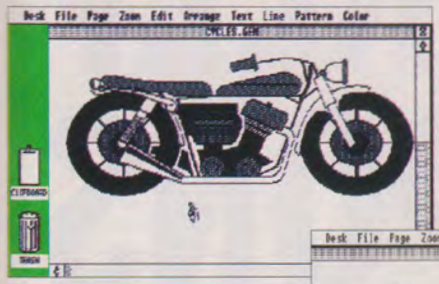
Each clip is both left and right-facing – no messing around in a graphics package.

ST REVIEW COMMENT: "The clips on this disk are nice enough, but not really up to the standard needed for semi-professional DTP. On the other hand, they're ideal for brightening up a word processed document."

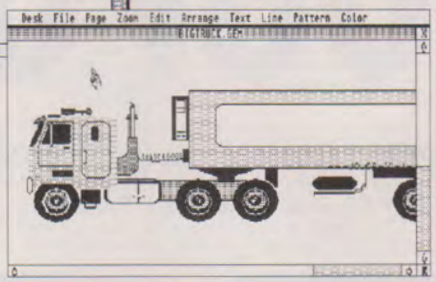
★★★

GEM STRUCTURED ART

NEW AGE PDL • DISK NO: CLIP.17 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • TIMEWORKS COMPATIBLE



Is your picture not quite right for the job? Load any of the GEM drawings into Easy Draw for a touch of ultra-fine tuning.



IN BRIEF: The annoying thing about 'bitmapped' pictures is that the better your printer, the worse they seem to look! Unless of course, you draw the clip around six times larger than you actually need and scale it down, and even then you have to take the file size into account! There is, however, a much better option – use 'structured' art, which relies on descriptions of the shape and hence takes full advantage of your hardware.

The ***GEM Structured Art*** collection contains 43 pictures in a structured Easy Draw 'GEM' format which can be imported into most DTP packages. Pictures ranging from windmills, to TVs, to scarecrows are to be found lurking in the folders and generally look very good in print. Once again there's no slideshow, so you'll just have to load them up and hope for the best!

ST REVIEW COMMENT: "Structured public domain clip art is pretty thin on the ground, but this disk could easily form the start of your collection. Worth its weight in Bezier curves!"

✪✪✪✪

WORDS AND IMAGES VOLUME 1

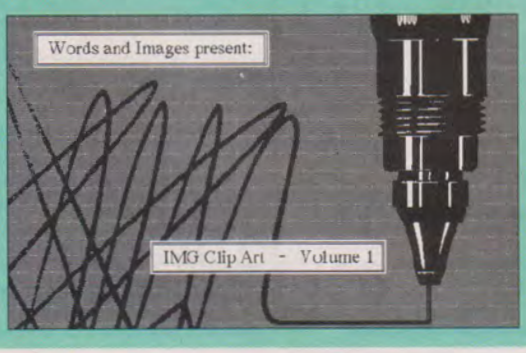
FLOPPYSHOP • DISK NO: CLIP.46 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN • TIMEWORKS COMPATIBLE

IN BRIEF: ***The Words And Images*** collection is a series of scanned clip art produced by John Weller. The quality of the pictures is superb and a lot of time has obviously been spent touching up the scans to make them look just right! The attention to detail and presentation are also excellent; two well-drawn title screens introduce the slides and tell you how to operate the show.

The supplied slideshow includes support for large-screen monitors by making sure that each grab fills the whole screen. Information on the pictures – size, width, height and name – can be called up by simply pressing <Help> and the show can be paused whenever necessary with a stab of the space bar.

ST REVIEW COMMENT: "The quality of the ***Words And Images*** scans is top-notch. The subject matter is a little off-beat, but some of the clips are general enough to be used as part of a normal publication."

✪✪✪✪



Each disk in the Words and Images series is professionally presented and accompanied by the best IMG slideshow available.

TOP TEN CLIP ART

1 MAC ART • THE ST CLUB • DISK NO: SSM.05 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

Some excellent hand-drawn and scanned pictures ported from the Macintosh. All files are in Degas PI3 format which allows them to be imported into all ST desktop publishers without any problems.

2 ANIMALS CLIP ART • THE ST CLUB • DISK NO: SSM.24 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

A whole disk full of fluffy, furry little creatures for you to add to your documents. Animals given the scanner treatment include Easter Bunnies, scorpions, hippos, seals and tigers.

3 IMG DROP-CAPS • THE ST CLUB • DISK NO: SSM.21 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

A handy disk for use with ***Timeworks DTP*** or other packages that have trouble with drop-caps. A complete Swiss style sanserif is provided and can be loaded letter by letter into any DTP package and text simply run around the frame.

4 WORDS & IMAGES 1 • FLOPPYSHOP • DISK NO: CLIP.45 • £2.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

This disk features some extremely well-scanned pictures exploring printers' ornaments. Although the clips are hardly modern, they're a good way to brighten up any middle-of-the-road publication. An excellent slideshow makes picking the cream of the crop easy.

5 FOOD ART • THE ST CLUB • DISK NO: CAT.23 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

The ideal disk for cafés and restaurants, this collection contains dozens of Degas pictures, ranging from uncooked vegetables and utensils through to steaming roast chickens. Take a few nice borders, add these clips and you'd have the ultimate menu!

6 GEM CLIP ART • NEW AGE PDL • DISK NO: CLIP.17 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

A selection of general clip art in a GEM 'metafile' format. From vehicles to banks, the range is huge and there's bound to be something of interest among the 42 clips on this disk. Thanks to the structured nature of the art, the quality is very good at any size.

7 IDL BORDERS • NEW AGE PDL • DISK NO: CLIP.16 • £1.50 • MEMORY: 0.5MB • MONO ONLY • PUBLIC DOMAIN

Some beautiful borders and decorations in STAD 'PAC' format. A custom written slideshow is included which can convert the pictures into most popular formats including IMG and Degas.

8 HANDS • THE ST CLUB • DISK NO: CAT.29 • £1.45 • MEMORY: 0.5MB • PUBLIC DOMAIN

This disk contains plenty of useful space fillers – pointing fingers, arrowed fingers, gun fingers, fingered fingers and lots more. The quality of the scans is excellent and all pictures are in Degas PI3 format.

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More clip art from John Weller, once again scanned to a very high standard, with the subject matter a bit more general. Cameras, animals, arrows, offices and printers are all part of ***Words And Images 2*** and once again all clips are in IMG format – a great collection!

10 PEOPLE CLIP ART • NEW AGE PDL • DISK NO: CLIP.13 • £1.50 • MEMORY: 0.5MB • PUBLIC DOMAIN

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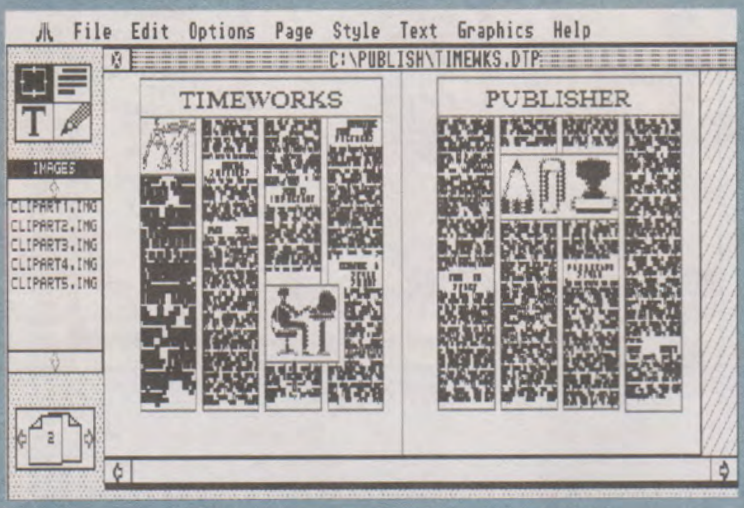
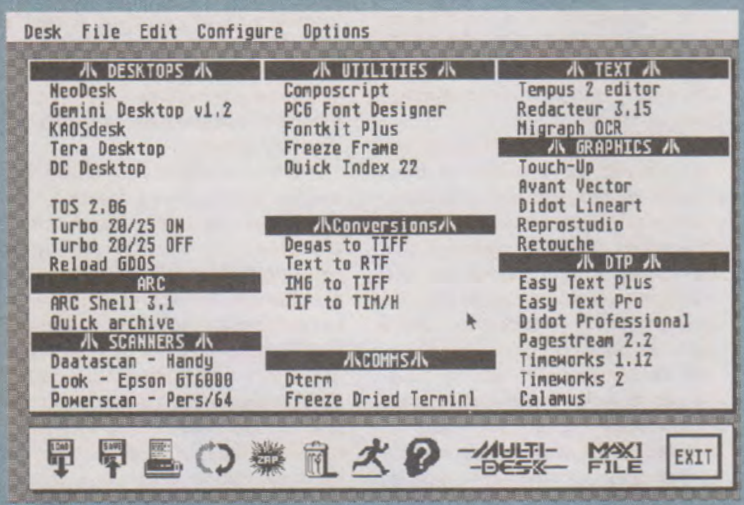


Turn to page 106 for part two of the Timeworks Tutorial.



Get the best from your ST with time-saving utilities like Maxifile.

Welcome to ST BUYER – the section of the magazine dedicated to people who want to use their STs to their full...

Inside this month, we have our usual mixture of goodies. There's our continuing step-by-step tutorial on Timeworks showing just how to get the very best out of last month's cover disks starting on page 106 and the first part of our HiSoft BASIC mini series which shows you how to program your own address book on page 118.

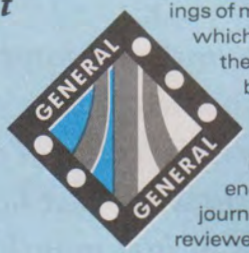
It's the End of the Rainbow for our productivity series on page 100 this month where we take a final overall look at the best ways to get the most out of your ST. The first part of a series on setting up your own PD library begins on page 114, where you'll be amazed at just how easily you could become a budding businessman.

We'd also like to know what you want from the magazine, so there's a questionnaire on page 116. There's even £1000 worth of games and application software up for grabs.

Add to all this competitions, Letters, Ask the Experts, Charts and Opinion, and you should find that whatever you want, it's here in the Blues!

THE END OF THE RAIN

Andrew Wright rounds up our series of articles on boosting your productivity with a look at the best way forward



Back in issue two, when we kicked off the present series on productivity, I had a stable system that worked pretty well. Now that I've sampled the dozens of interesting utilities and add-ons that we have reviewed in these pages over the last six months, it looks completely different!

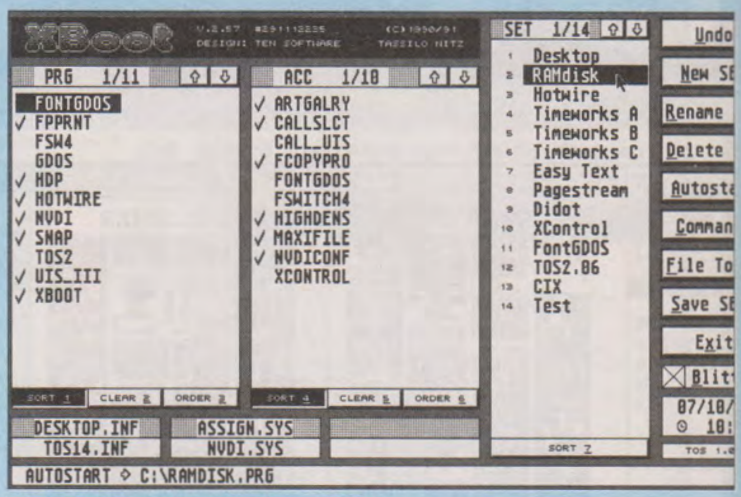
Before I lay bare the inner workings of my ST's soul and tell you which add-ons are best, there are a few points to bear in mind. First of all, no two users' needs are the same, just as no two users' preferences are the same. As a journalist and software reviewer, my own machine is in action for anything up to 16 hours at a stretch, most days of the week. Under these sometimes hectic conditions, every ounce of speed and every shortcut helps, especially when faced with those awkward deadlines.

Secondly, of course, not all the add-ons and improvements that can be made are 100 per cent compatible. This can lead to a lot of disappointment and although it's virtually impossible to provide you with an exhaustive list of incompatibilities that you may encounter, we can give you some guidelines to follow if you're contemplating souping up your system.

Finally, you remember that there is no such thing as the perfect system. Mine changes a little each day as I discover some new quirk or feature. Increasing your productivity is all about evolutionary change – after all, who knows what new products will appear tomorrow?

BOOTING UP

When you switch on your ST, what do you see? Most people see the GEM desktop with its friendly little icons but when you've got to that stage, you've already made quite a few decisions without even realising it. You've already chosen your desk accessories and AUTO programs and they are sitting in memory waiting to be called. The only way to remove them or change them is to reboot.



The friendly welcoming face of XBoot.

With a boot manager installed, the booting up process is temporarily halted and the first thing you see is a list of available accessories and AUTO programs. You make the choices there and then, depending largely on what you are about to do, and then you simply continue booting.

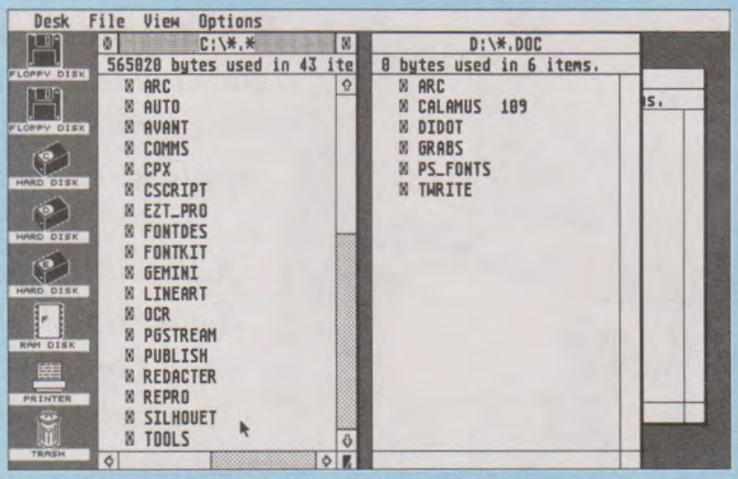
XBoot is my own choice for booting up. It looks much better than ***Superboot***, the shareware equivalent, and it lets you use the mouse to select programs and accessories. It also has some clever features and is much more flexible. At £29.95, it comes with an excellent manual and represents good value for money.

The main benefit of ***XBoot*** is the ability to define several different setups once and then select them afterwards by a simple mouse click. Look at the screen shot (above) carefully and you'll see the list of different setups down the right-hand side of the ***XBoot*** screen. They can be clicked on with a mouse or selected via various function key combinations.

The first is the default setup that loads a replacement desktop from disk and includes some other essential accessories for managing files and disks such as ***Fastcopy Pro*** and ***Maxifile***. It also includes essential system enhancements such as the high-density floppy disk driver and NVDI, the screen accelerator. This is the default setup and the one to use when copying files or carrying out routine disk management functions.

My normal replacement desktop is ***NeoDesk***, although the ***Tera*** desktop is currently installed because it's new and I'm curious. I would much prefer TOS 2.06 in ROM than loading a replacement from disk, but for the sake of a few seconds at boot time, most replacement desktops offer significant time-saving features over TOS 1.4.

Three vital features for me are the ability to open more than four windows at once (a floppy drive, three hard disk partitions and a RAM disk), the ability to place program icons on the desktop itself so that they can be called up quickly and easily and, thirdly, the facility to select every file in a window without having to repeatedly scroll up and down. There are plenty of other features that deserve a mention of course, all of which will help you to move swiftly around the desktop and carry out day-to-day filing operations very quickly. Keyboard



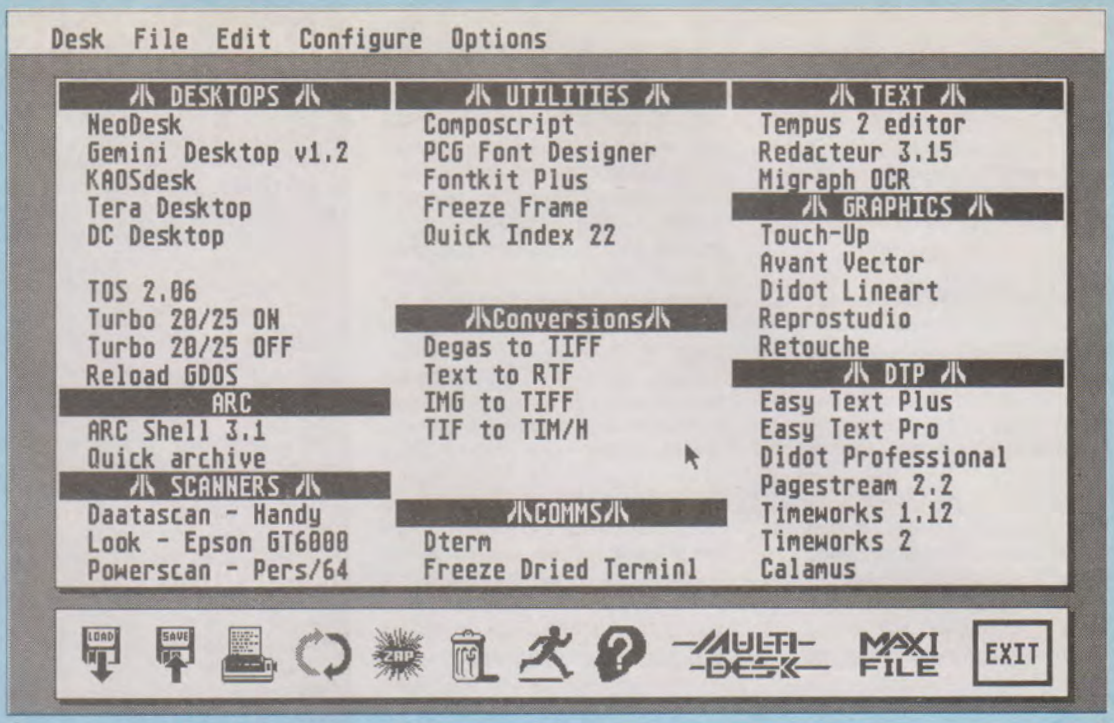
Tera – the latest in a long line of replacement desktops.

BOW

shortcuts are particularly useful, especially for often-used desktop commands such as Show Info.

I could, incidentally, load TOS 2.06 from disk, but if I do this it won't load two other important utilities, the ***Universal Item Selector*** and ***Hotwire***. I could also install it in ROM, of course, with an official Atari-approved TOS 2.06 upgrade from Compo Software.

The second setup installs the same desktop, programs and utilities as above but adds a two Megabyte RAM disk. The third setup is ***Hotwire***. This loads only the essential accessories and AUTO folder patches, no replacement desktop or operating system, and then automatically starts ***Hotwire***, the application start-up utility. I use this option if I'm going to launch a particular program straight away – most of the memory is still available and the ***Hotwire*** screen presents a friendly and very convenient way of choosing which application to load. It can even be set up to load a particular file – such as a letter template in your favourite word processor or an accounts spreadsheet.



Hotwire lets you select any program or file.

SPECIAL SETUPS

The other setups are for special purposes. There are various GDOS ones that select the appropriate ASSIGN.SYS file to load for a given application. In the case of ***Timeworks***, there are three different ASSIGN.SYS files, each of which loads a different set of fonts depending on the job to be done.

There are some specialised setups for applications such as ***Didot Professional*** that don't always work with other utilities. The CIX setup loads a terminal program directly, complete with configuration, having first installed all the appropriate system patches to correct defects in the ST's handling of serial port communications.

Finally, there is a blank setup called test that simply loads TOS 1.4 and nothing else. This is useful when testing and reviewing programs or general troubleshooting.

DOWN TO BUSINESS

Once you're underway, the accessories and AUTO folder programs that you've chosen will make their presence felt. If you've made the right choice, it will save you plenty of time.

Desk accessories are the closest that most of us have yet come to multi-tasking on the ST. They have to be chosen with great care to extract the maximum benefit. An unused accessory slot is understandable – at least it conserves memory – but installing an accessory that is never used is a far graver waste.

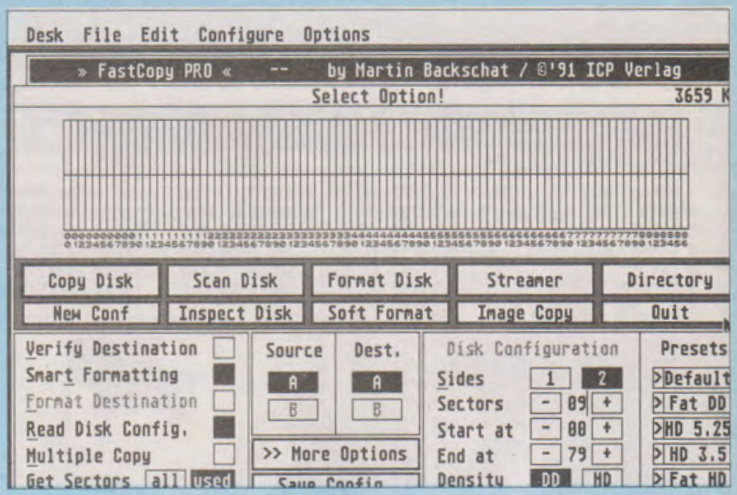
MULTI-PURPOSE

Desk accessories have many purposes. Some change the configuration of certain programs, but you have to ask yourself whether they are really necessary. The ***NVDI*** and high density drive configuration accessories on my own system are rarely used – it would be better to install a useful accessory such as a text editor (useful for making notes while working) or even a calculator if I'm doing my accounts.

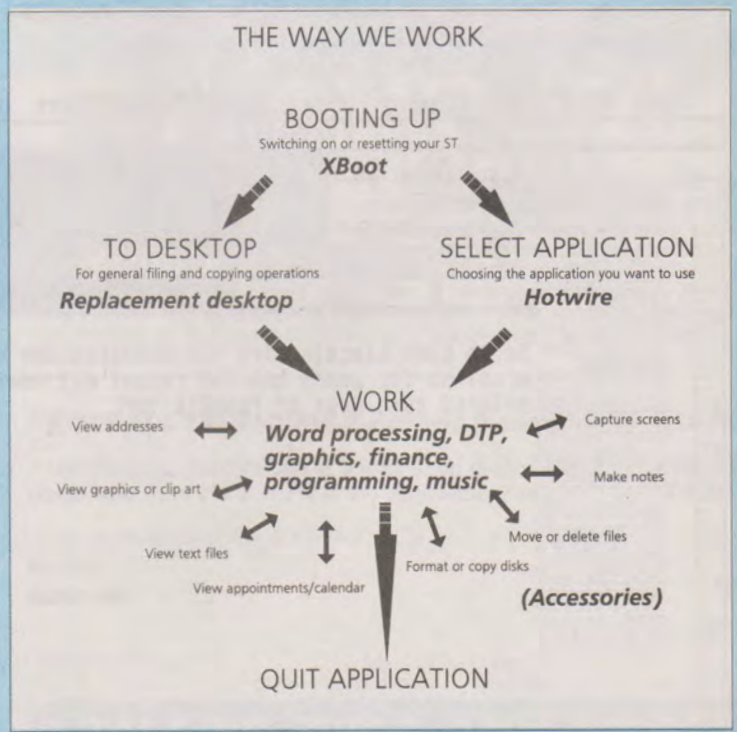
The key is to make sure that the desk accessories that you install cover the broad range of things you are likely to need to do while you're working away. The illustration shows a diagrammatic representation of the way most of us work. After booting up and getting into an application, there are a dozen minor jobs that need doing at awkward times. To do them without leaving the main program, we use desk accessories.

INDISPENSABLES

My own list of indispensables includes ***Fastcopy Pro***, ***Maxifile*** and ***Art Gallery***. ***Fastcopy Pro*** is used in accessory mode for quickly formatting a disk whenever I need it. ***Maxifile*** takes care of just about everything, but it is particularly good for moving files around or searching for missing ones. ***Art Gallery*** is an excellent way of looking at previous screen shots, taken using a PD snap utility, to check that they're what I wanted and to write appropriate captions. I'm



Fastcopy Pro – the ultimate disk copying and formatting utility.



The way we work.

also trying out a newish text editor called ***EDDA***. Having this installed lets me make notes while running review software as well as jotting down random thoughts. It is also useful for creating text within ***Timeworks*** or ***Pagestream*** (which don't have built-in editors), saving it as a text file and then importing it into the DTP program.

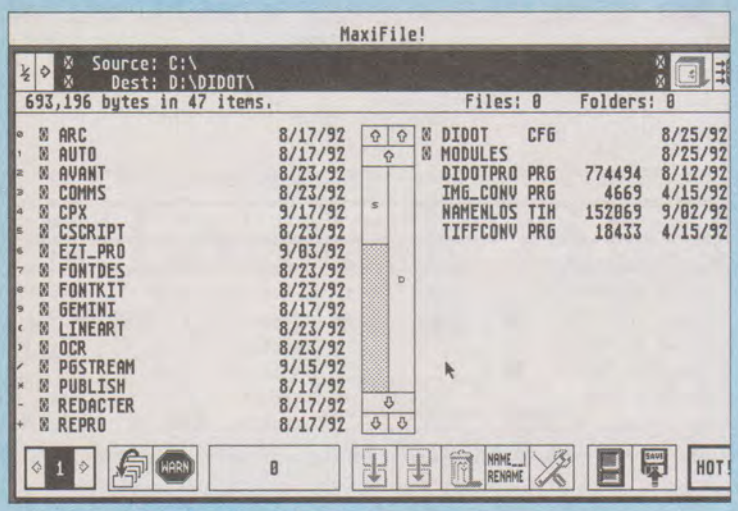
FULL SPEED AHEAD

If you can set up your system with plenty of forethought and preliminary planning, you will have a fast flexible system. One of the benefits of owning an ST is that it is a highly reliable machine that won't let you down once it has been properly configured and all the minor incompatibilities sorted out. It also has plenty of room for expansion.

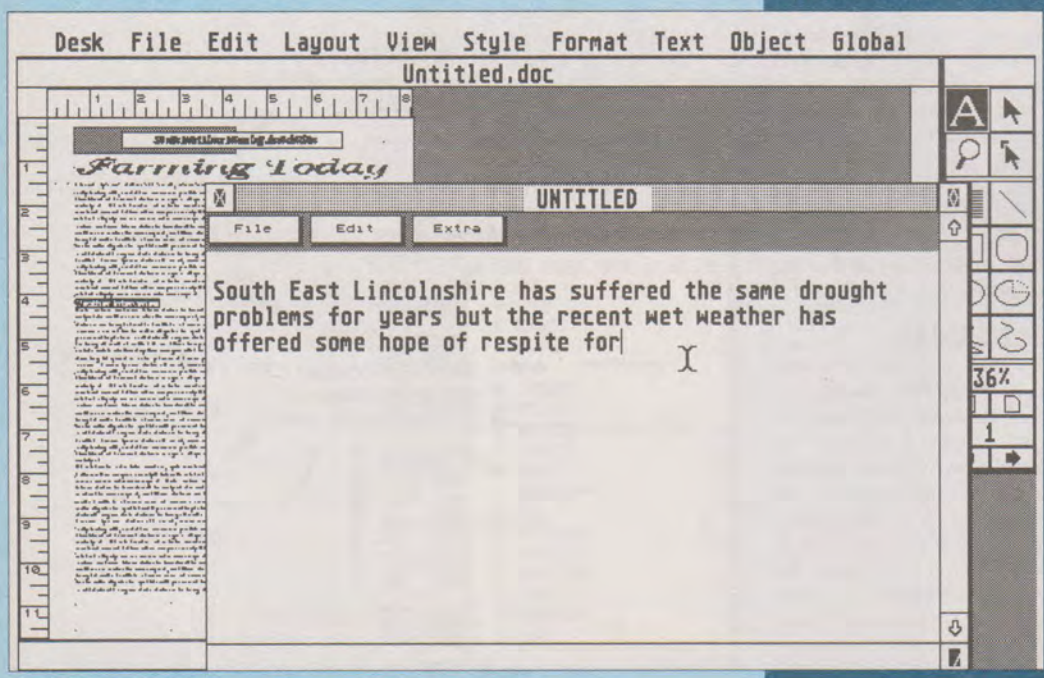
The Turbo board discussed in last month's article is the ultimate in speed upgrades, but there are plenty of cheaper ways of making your ST speed along.

Software accelerators such as ***NVDI***, ***Warp 9*** and ***Turbo ST*** are a must. Anyone who has resisted looking at one of these must be a masochist. When you see the amazing speed at which your ST appears to run, you'll never want to remove it. ***NVDI*** really does make you feel like you're working under turbo power – it's so fast at redrawing the screen, scrolling text and opening dialogue boxes. For my money, ***NVDI*** is your best bet, scoring in total compatibility with virtually all ST software (with the exception of ***Redacteur***) and giving the best all-round performance.

If you follow the guidelines for better productivity, you'll find that both work and play become easier and faster. Although I have the pick of the crop as far as software is concerned, buying the very best utilities adds up to a relatively modest investment that would pay for itself quickly in terms of time and effort saved. Apart from the Turbo board, there's no special hardware in my ST at all but it zips along like there's no tomorrow. In fact it runs so fast that some days I swear it even knows which key I'm going to press next!



It's easy to describe Maxifile – it does everything.



EDDA – text editing any time, any place, anywhere.

MAKE THE MOST OF YOUR MEGS!

Upgrading your ST's memory can make all the difference in terms of speed and accessibility. Putting four Megabytes of memory in an ST might seem wasteful, but in fact you can make every Kilobyte count. Not only can you add more accessories (even beyond the normal limit of six using programs such as MultiDesk) and still run memory-hungry graphics and MIDI programs, you can also install printer spoolers and RAM disks to really turbocharge your applications.

A RAM disk is an area of the ST's RAM that is set aside to store program and data files as if it were another disk drive. The ST treats a RAM disk a little like another hard disk – if you install one as drive C, you can even boot from it! You can copy any files into the RAM disks, open windows onto it from the GEM desktop and even run programs from it.

The main advantage is its speed. Most RAM disks can transfer data at incredible speeds – up to 30 times faster than a floppy disk drive, in theory, and around five times as fast as a standard hard drive. And with memory prices as low as they are at the moment, it's definitely worth considering.

PUBLIC UTILITIES

Most RAM disks are available in the public domain as they are not worth developing commercially – especially with the standard of competition as high as it is. Interestingly enough, ***K-Ram***, an old Kuma product, was the first commercial utility to be released for the ST. Among the more widely used PD ones are ***Maxidisk***, ***Eternal*** and ***Turbo***.

There are many different types of RAM disk and the one that you choose will depend on what you want to achieve. Some are reset-proof which means you can reset your machine and still have the data sitting in the RAM disk. This is useful if you want to use it as a temporary data store for programming or working on large music files. If it happens to be called drive C, you can even load accessories and even AUTO folder programs from it. Now see how fast your ST boots up!

Some run as accessories, taking up one of the six slots, of course, but having the advantage that they can be resized or even switched off halfway through a session. Some RAM disks can have all of these features and more besides. Maxidisk, for example, compresses data and program files 'on-the-fly' and then decompresses them when they are copied elsewhere or used by a program. This means that, if a 15K file is copied to MAXIDISK, it takes up around 10K of space as it is automatically compressed. A one Megabyte RAM disk can thus hold up to 1500K of data.

SAVING TIME

RAM disks can also be configured to automatically load files into itself on start up, which can save a lot of fiddling about and copying files across every time you reboot the ST.

One of the most common uses for a RAM disk is for copying a large number of files from one disk to another. The GEM method can be tedious but if you copy them into a RAM disk and then onto the floppy, the process becomes much easier.

Running programs from a RAM disk can speed up the operation considerably. Even on a basic 520ST, a 300K RAM disk will hold two or possibly three small programs such as ***First Word*** or ***Neochrome***. Quitting from one and then loading the other takes a fraction of the time that it took before. On a four Megabyte ST, a two Megabyte RAM disk will hold a major application such as ***Timeworks*** or ***Calamus***, together with all the font files. ***Timeworks*** benefits considerably from using a RAM disk as it uses overlay files – files that it loads from disk whenever the user selects a particular operation such as the frame, text, drawing or paragraph tools.

Printer spoolers act in the same way as RAM disks, allocating a part of the ST's memory for print output. The advantage of a printer spooler is that, when you press the print button to output a long document, instead of watching the 'busy bee' icon for several minutes, you are straight back in control. The spooler releases the data to the printer as fast as the printer can handle it.

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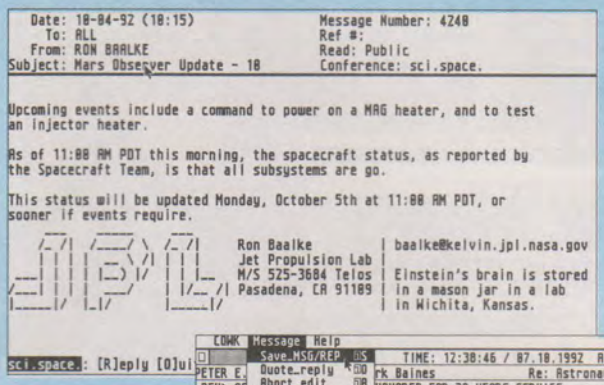
READING BETWEEN THE LINES

This month, Mark Baines looks at ways of taking part in on-line comms without it costing the earth



Maxi-Miser – reading a message and showing the many options available.

Many comms users, especially new ones, read every message and reply to those of interest whilst they are still on-line, with the telephone bill adding up. There is a great pressure to rush things.

Those who spool the messages into their terminal program's buffer to read them off-line do better, but if you then want to write a reply you have to use an editor and upload each one separately. It's little wonder, then, that the majority of BBS users don't enter messages.

QWK QWK!

Most BBSs now have something called a QWK compatible Door (QMail, MaxiDoor, RAMail) through which you can obtain your conference messages instead of going through the normal Message menus. You simply Tag the conferences that you want to read, choose the QWK Door menu option, configure it (using the compression method, transfer protocol) and it will download a compressed QWK file to you.

This contains an index, BBS logo and bulletins and your messages. You then log off.

With a scripted terminal program such as ***Freeze-Dried Terminal***, most of this can be automated.

OFF-LINE READER

You load the QWK file into your Off-Line Reader (OLR) which decompresses it and displays the messages to you as if you were on-line. You can read them at leisure and reply to any with the built-in editor. You are given the option to quote from messages so that the recipient knows what you are referring to.

Some OLRs allow Taglines (one-line messages) to be added at the bottom. Your messages are then compressed and when you are on-line again you upload the file to the QWK Door which enters them into the correct conferences. You then collect your next QWK packet.

MAXIMISER V2.09C

SHAWN SMITH • SHAREWARE • $18 (CANADIAN) TO CANADA • NOT CRIPPLED

Version 1 of ***MaxiMiser*** was the first OLR for the ST, and was a non-GEM program which gained much support. Version 2 is still a TOS program with some GEM bits bolted on. Feature-wise it is the best, with the Twit-List (choose people not to receive messages from), Threading (follow a certain topic) and a comprehensive editor its best features. Replying to messages and quoting from them doesn't have the ease of ***MT-QWK*** and the editor does have its quirks.

✪✪✪✪

MT-QWK V1.8D – MICROTALK QWK

WOLFGANG ZWEYGART • FREEWARE • VOLUNTARY CONTRIBUTIONS

MT-QWK is strictly GEM and follows its guidelines closely, although full keyboard control is available. Its combined reader and editor and ease of use are its strongest features. The editor lacks the functionality of ***MaxiMiser*** but is adequate, usable and stable. Different sized fonts are available both here and in the reader. Scrolling is slow and re-reading your own messages is awkward. The search option could be better but deleted messages are removed at source before being uploaded to the BBS.

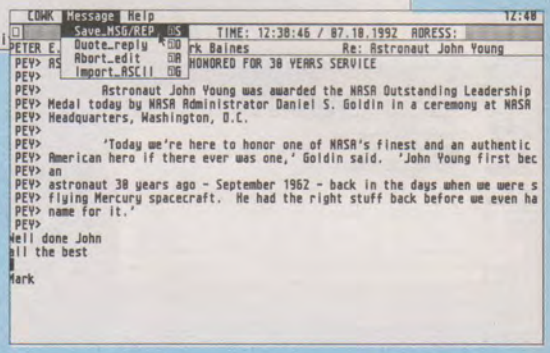
✪✪✪✪

C-QWK V1.3E – CAPTAIN'S QWK

DIRK HOESCHEN • CRIPPLEWARE (SLIGHTLY) • £10 TO GERMANY

C-QWK initially impresses with its logical way of operating. However, you soon realise that you can't do some things that you took for granted in the others. Its user interface is mid-way between ***MaxiMiser*** and ***MT-QWK*** and can be awkward at times. The editor is practically unusable with no way of deleting lines (Control-Y didn't work) and being constantly in overwrite mode. The author is still updating the program so let's hope that he pays more attention here. The search facility is the best and a built-in ANSI font enables the viewing of animated ANSI BBS logos. Taglines are used and the program is stable.

✪✪



Captain's QWK – using the very basic editor to reply to a message showing a quotation.

CONCLUSION

The advantages of OLRs make them essential, although the one that you actually choose depends on the type of interface that you prefer. If you need to enter messages then C-QWK is not for you. All three programs can be found on most BBS or PD libraries, so you can try them all!

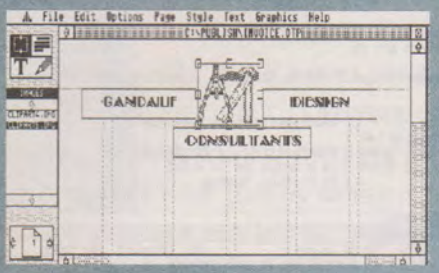
PROS AND CONS

So what difference does an off-line reader really make? Our list of pluses and minuses should help you decide whether it's the right thing for you

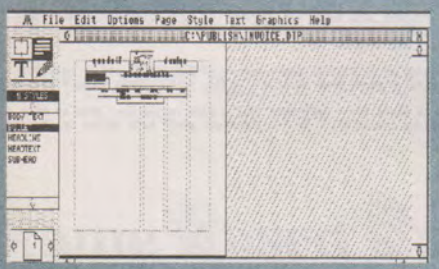
- Less time is spent on-line, saving you money.
- You can read messages at your own convenience and speed. If you keep old packets you can refer back to past messages.
- Replying is easy, increasing your participation. Everyone has something to contribute!
- Replies can be properly researched first.
- You can edit and re-edit your own messages until perfect – no more spelling mistakes and badly phrased, rushed messages.
- Your decreased on-line time enables others to use the BBS.
- Increased messages in the conferences results in greater exchange of knowledge and more help for all users.
- Newcomers may find it difficult to understand and set up at first.
- There is an increased tendency to enter messages of little relevance and 'chit-chat'. You don't have to reply to everything!
- The increased number of messages may increase download times, although it's still less than doing it 'manually'.

STEP BY STEP

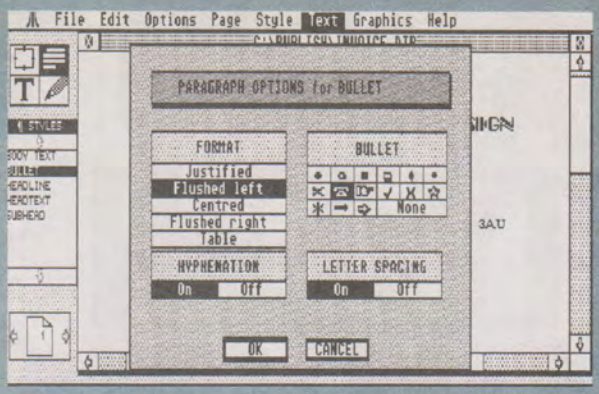
Laying out a business form takes time and patience. It's worth taking time to make it clear, simple and professional



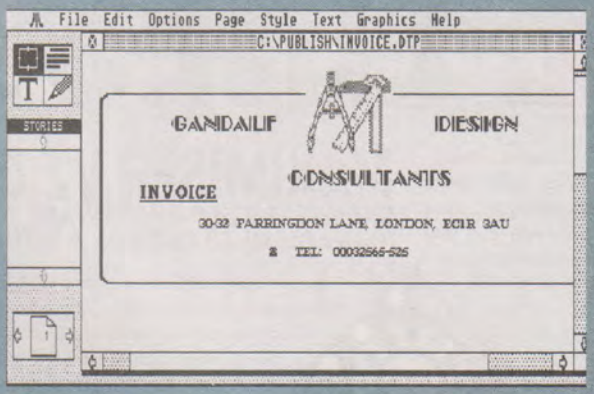
1 ***First you need to create your company logo at the top of the page. Here we are inserting a picture to give the company an identity of its own.***



2 ***Don't make the logo too big – about a quarter of the page is enough. Notice that the text becomes blurred. This is quite normal and is known as Greeking.***



3 ***The bullet option in the paragraph menu. Change the bullet symbol to a telephone.***



4 ***Adding a border around the heading. This separates the heading from the invoice, making the whole thing look tidier.***

TIME ON YOUR SIDE

TIMEWORKS TUTORIAL PART TWO

Continuing our tutorial on Timeworks, as given away on our cover disks last month, Tony Kaye looks at business stationery and using clip art in your documents

Last month, we covered the basic layout of a newsletter and showed you how to make a flyer. Now we're going to look at how ***Timeworks*** can help you in business.

In this tutorial we are designing an invoice and a menu, but it's easy to see how these techniques can be used for letterheads, delivery notes and even compliment slips.

CREATING AN INVOICE

As suggested last month, it's a good idea to plan out roughly what you want your document to look like before you begin. The process of laying out columns and boxes can be a little tricky, and patience is a prime requisite.

First you need to design a letterhead to give your documents a corporate identity. Once you have decided on a logo, create a page and set out the heading. We have created an imaginary company called Gandalf Design Consultants and taken a logo from the clip art provided on the cover disk (see the next page for how to import a picture from clip art).

STYLE

Depending on the type of company, the style will vary. For example, a company selling a range of catalogue goods will need a lot of columns for stock numbers, unit prices, discounts and VAT ratings whereas a service company (as in our example) needs space for descriptions of the services provided.

Adding borders to the heading can separate it from the rest of the form and make it look more professional. The next step is to create the boxes for the figures.

LINES AND BOXES

It isn't always easy to tell where you are and which box you can work in at this point. You'll find that, until you get used to the package, you will be swapping boxes and moving others.

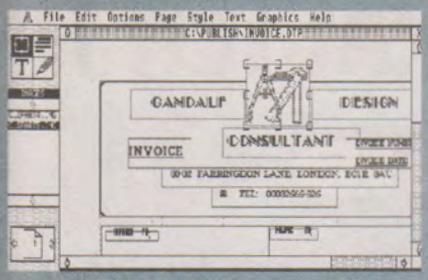
The lines and boxes are created using the drawing tool from the toolbox. Use the view option to go to the ends of the lines and make sure that they fit. You will need to create boxes for various different purposes depending on the needs of the company. In our example, we've created boxes for Invoice Number, Account Number, Salesman, and others. Space has been left for a description of the service provided and a box has been created for the totals (and the VAT!).

As you proceed, save what you have done every 10 minutes or so. There's nothing worse than working away for a whole evening and then making a fatal error before you've actually committed the document to disk.

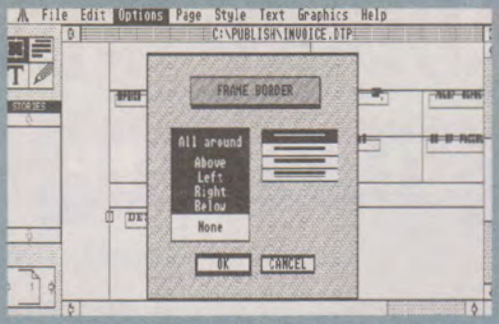
MENUS

Another form that is often needed is the menu. Most restaurants have extra seasonal items that, up until now, they've hand written or run up on a typewriter. If you can convince them that a properly designed menu would improve their presentation, then you could earn some pocket money.

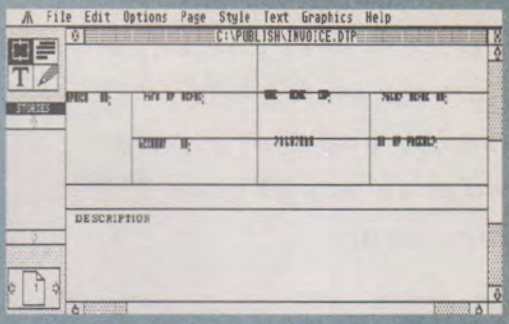
Menus are fairly easy to lay out, but it's easy to get carried away and try to be too fancy. Keep your designs straightforward. Remember that what the customers are interested in is what's on the menu, not who created it.



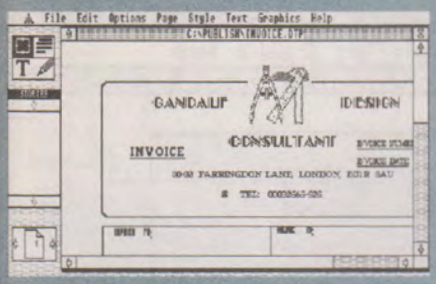
5 *The top of the form with all the guides showing. To show how it looks without the guides, use Show Columns and Guides under Options.*



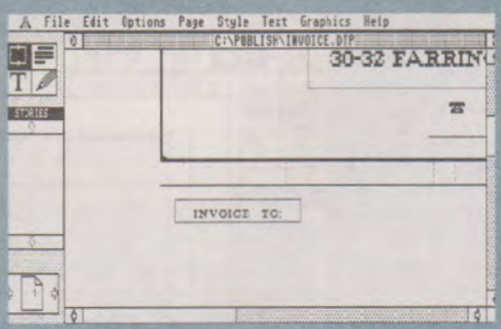
7 *Choose the thin line for the borders to stop it looking clustered.*



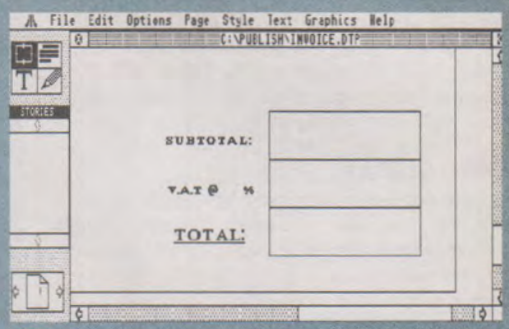
9 *Carry on adding text. The word 'Description' is larger than the text above it. The small text has greeked.*



6 *The same part of the form without the guides – ideal for getting an idea of the finished document.*



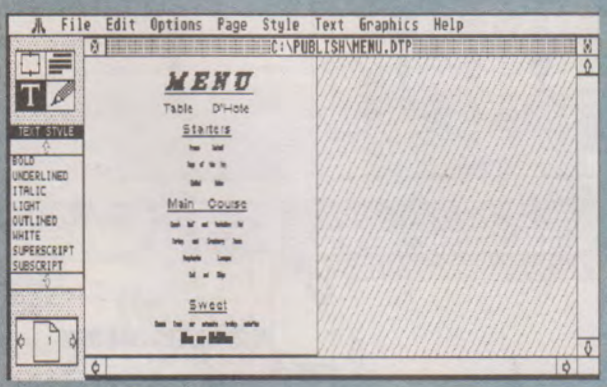
8 *Once all the boxes are drawn, add the text to each one as required.*



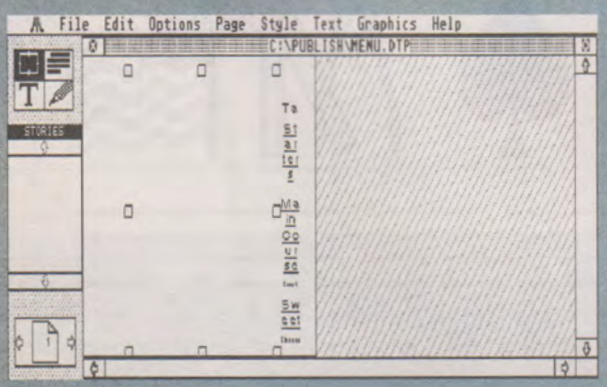
10 *Don't forget to add a box for the totals, including the dreaded VAT!*

STEP BY STEP

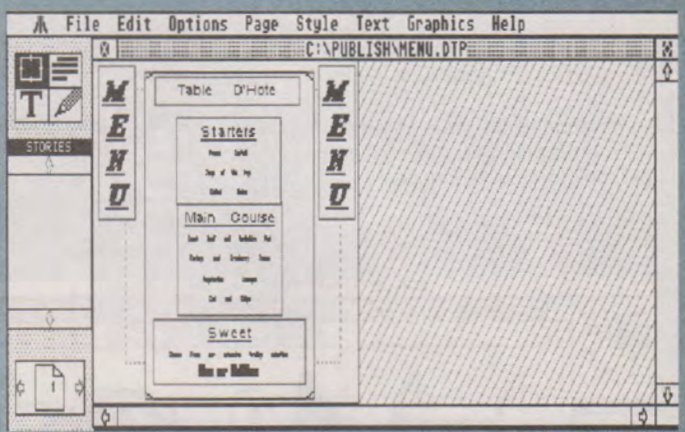
Creating a restaurant's menu is fairly easy to do and could even earn you some money. Here is a simple menu. You probably already have ideas of your own...



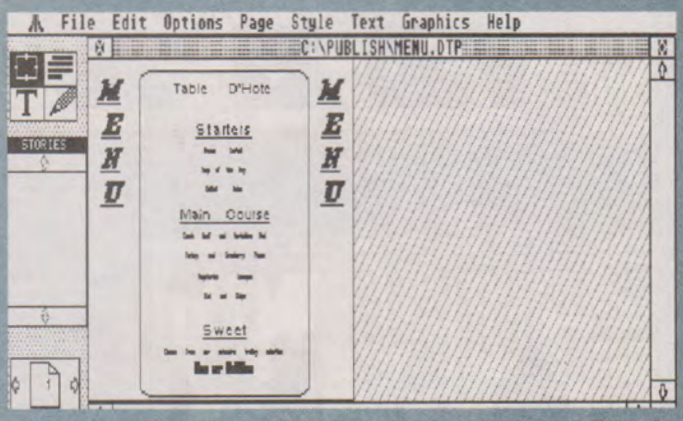
1 *Here is the basic layout of a very simple menu.*



2 *Open a box covering the text. Add a round-cornered box. Select Put in Back from the Page menu to border the text.*



3 *By moving the frames around, we've placed the word Menu down the side of the page. Using copy and paste to create a duplicate, a rather pleasing effect is easily created.*



4 *...And here is our finished menu. It's not too complicated, but still quite effective.*

ADDING CHARACTER TO

On this month's coverdisk, there are over 250 clipart pictures which can be used to add that special touch to any of your DTP documents

STEP BY STEP

Clip art can be very useful for adding character to your copy and breaking up large chunks of text. This makes it easier to read and more pleasing to the eye...

The easiest way to break up a block of text is to add a picture. It's often difficult to create your own pictures, and one alternative is to use a clip art disk. These are available from most PD libraries and usually consist of pages of small pictures that can be "clipped" and used in your document. As well as the usual great commercial package, we have included five sheets of clip art on this month's cover disk.

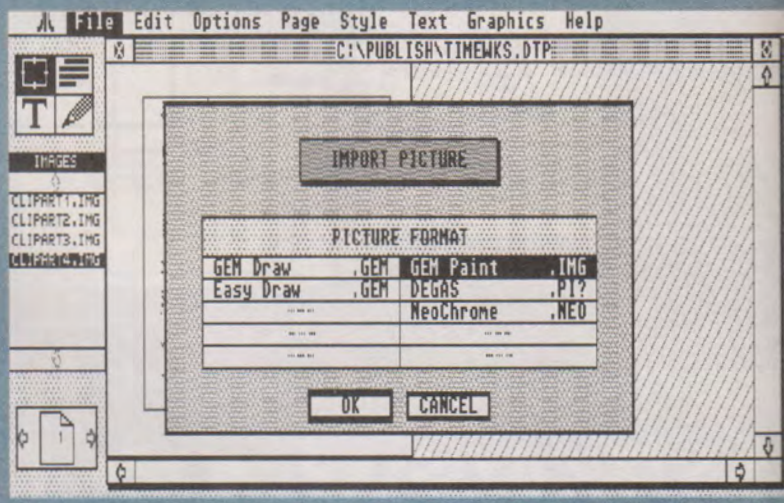
USING CLIP ART

Clip art comes in the form of a large sheet of pictures. You need to select the picture that you want from the page and remove it to memory. Because it is a crop from a full picture, you can't just import it straight into your text.

In the example shown on these pages, we have used the double page spread that we created last month and added new pictures. In this case, we used the blank page (page one) to view and select the pictures needed before moving them on to the newsletter.

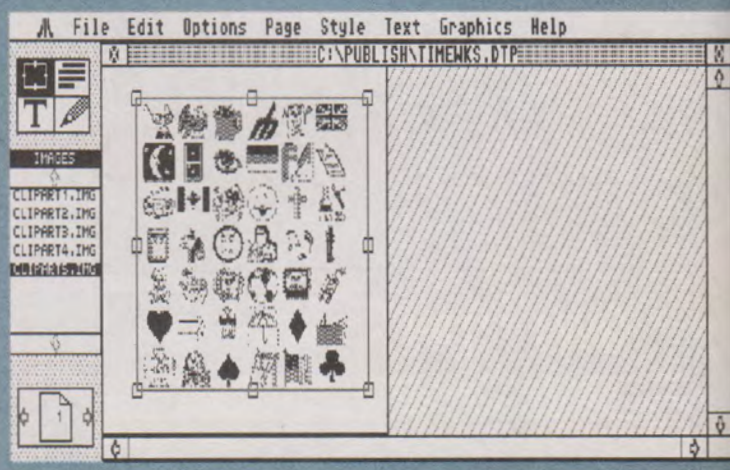
Once a picture has been chosen, it can be used like any other graphic. You can change the ratio (vertical or horizontal dimensions) or keep it as it is.

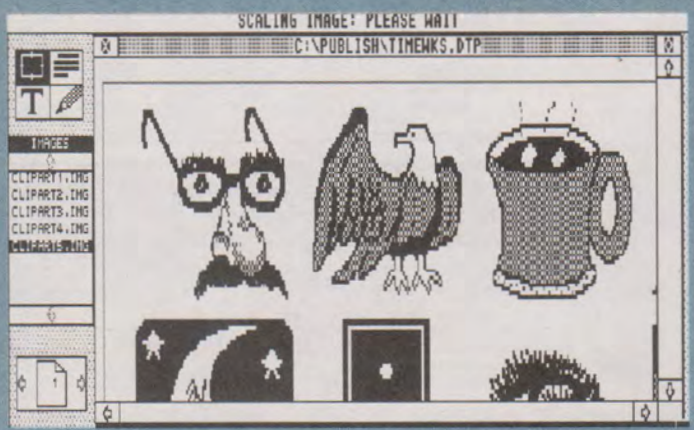
This will depend on what the picture is and how it looks. Again, you can experiment to get the right look for your own use.



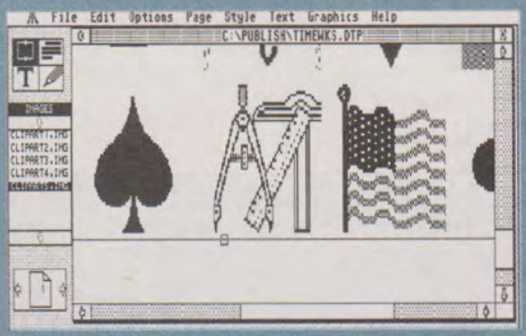
1 *Select Import Picture from the File menu and select GEM Paint .IMG as shown. The files are in a folder called TIMEWORKS.ART on disk one on this month's cover.*

2 *Each page has a variety of pictures. You may need to adjust the page size to get a better look.*

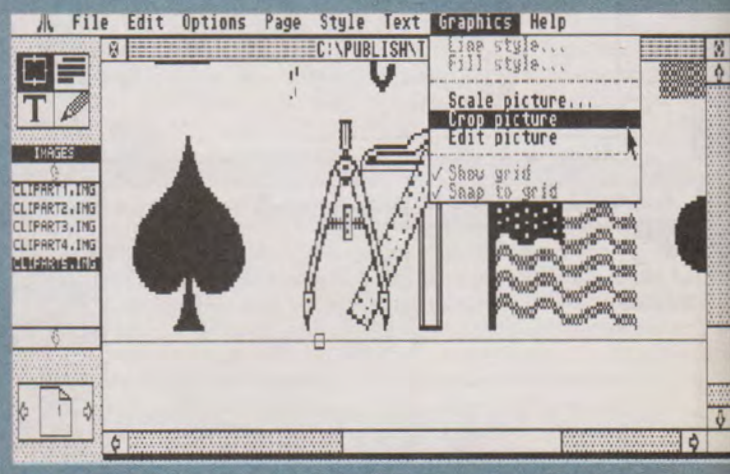




3 *This is what the same page looks like at double size. The redraw time is slow as the whole picture has to be scaled.*

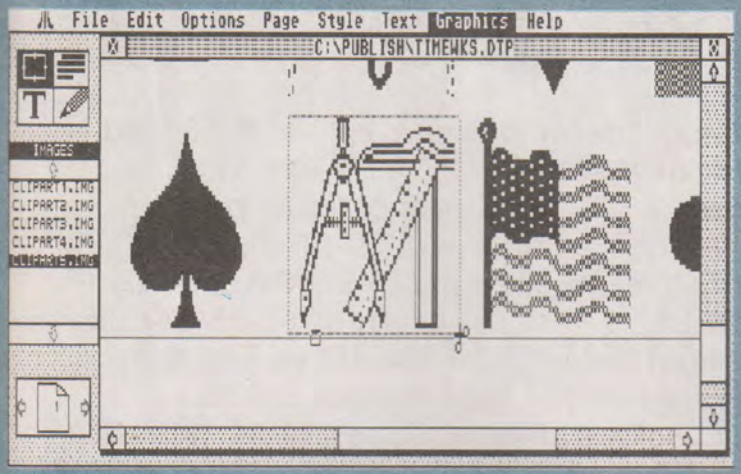


4 *You will recognise these from the previous page. This is the picture we are going to use.*

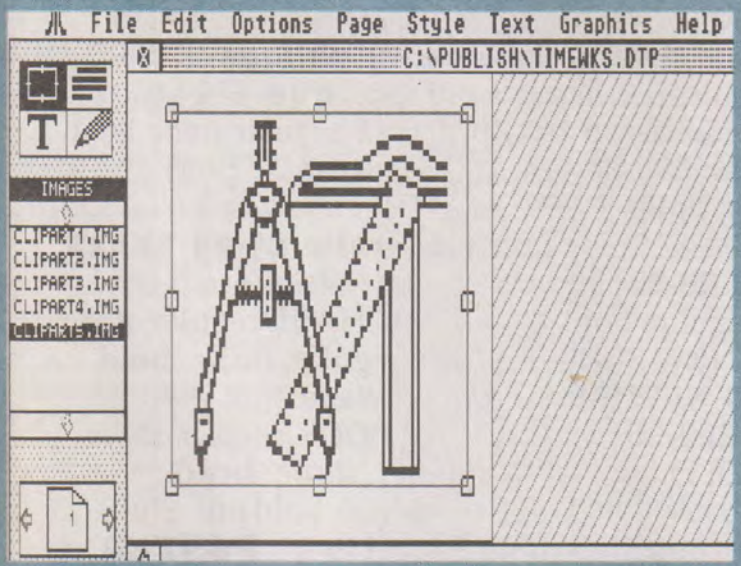


5 *Select Crop picture from the Graphics menu and the mouse should change to a pair of scissors.*

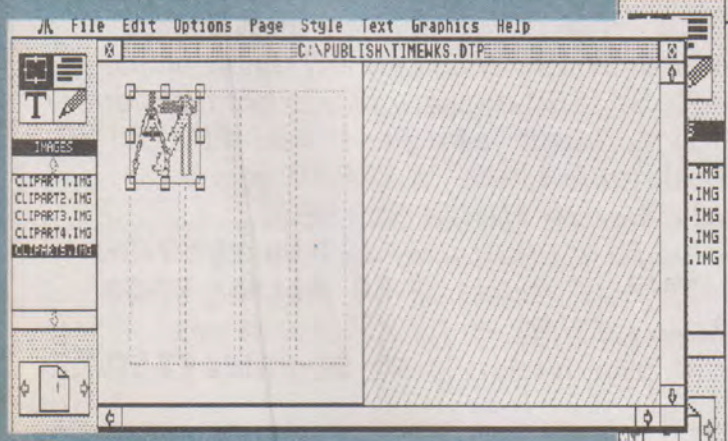
YOUR NEWSLETTER



6 *Drag a box around the picture that you want to use. Be careful not to crop it too closely or release the button before you are ready. If you do, then just click on the name of the file in the images box to start again.*

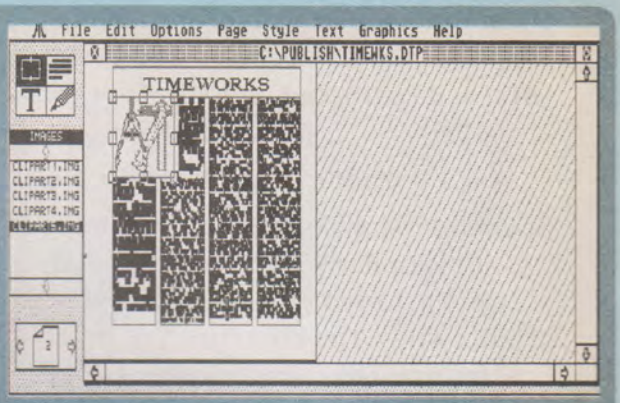


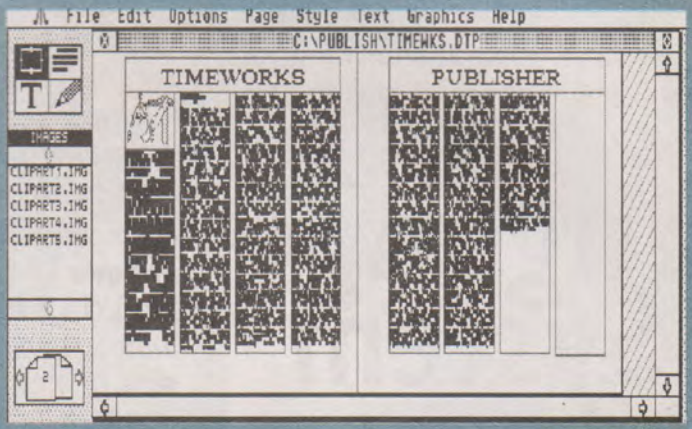
7 *The cropped section of the picture now fills the entire frame. If needed, you can crop it further by repeating the procedure.*



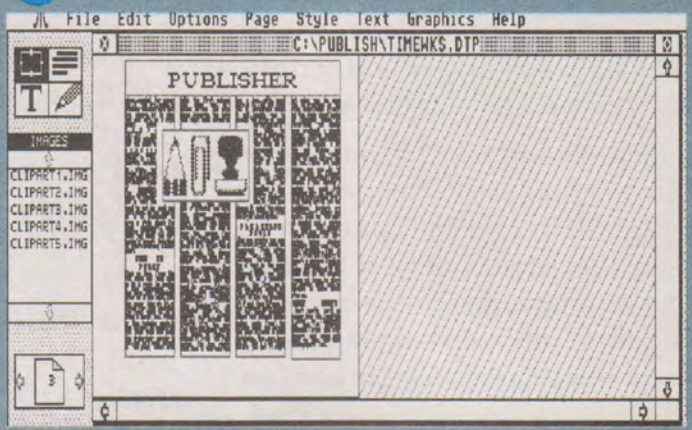
8 *Reduce the size of the frame to make it more manageable. Using the options presented under the Graphics menu, you can keep it in proportion or not as needed.*

9 *Cut the frame from the blank page and insert it into the text. You can now move and resize it as necessary.*

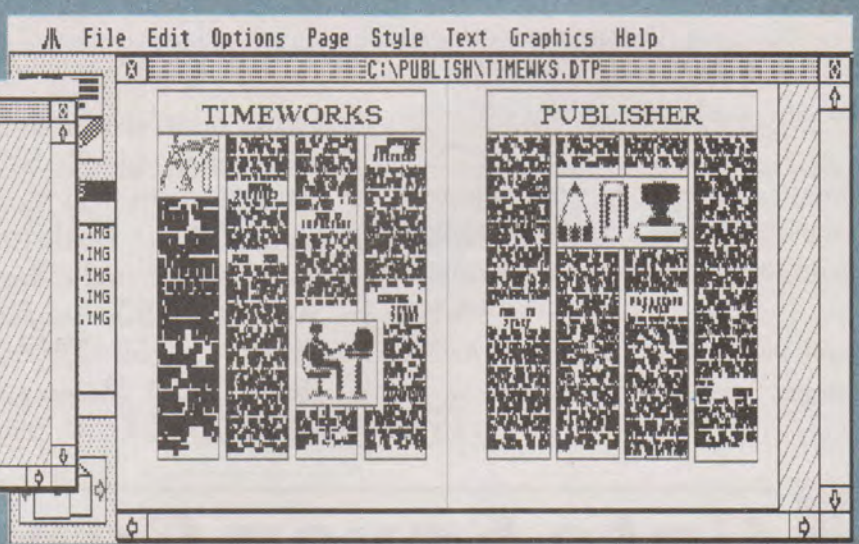




10 *The picture fits in rather well at the top, so now it's time to look for some more.*



11 *Another drawing is added. By using crossheads and pictures, the text now fits the page.*



12 *The final document with crossheads and pictures in place. The overall look is pleasant and not too heavy.*

These are just a sample from our catalogue of high quality vector fonts.

The fonts are available for Calamus, Didot, PageStream, and PostScript for STs, and PostScript and TrueType for Windows.

Phone for a full catalogue.

Special versions of the Calamus fonts are supplied for conversion to bit-image formats such as GDOS and That's Write. The limitations of these formats may lead to non-optimal spacing, particularly with italic faces.

Gate Seven also supply a full range of hardware and software for serious users.

The Language System

Gate Seven specialise in software for the production of documents in multiple languages and scripts, concentrating on Atari and PCs.

Our standard Roman fonts contain the full set of characters included in the ISO standard Latin 1 set, and can be used for a wide variety of Western European languages. Fonts covering all additional European languages and Vietnamese are available at extra cost.

We are particularly proud to be supplying Atari DTP systems for use in Ethiopia. These very definitely provides power without the price in a part of the world where they are much needed.

Bengali, all Cyrillic-based languages, Devanagari, Greek, Gujarati, Punjabi (Gurumukhi), and Tamil are available for Calamus, too.

We have PC-based software for Arabic, Chinese, Farsi, Hebrew Japanese and Urdu.

AGES book *oblique* **demi *oblique*** £19-95 AGES med *oblique* **bold *oblique*** £19-95 AGES light *oblique* **ultra *oblique*** £19-95 AG book *oblique* **bold *oblique*** £19-95 BEN book **bold** £9-95 BERLIN £7-50 BOOK std *italic* **demi *italic*** £19-95 CALAMUS **bold** £9-95 *CHANCERY italic* Upright £9-95 CORN Regular *italic* **bold *italic*** £19-95 **DOMINUS std bold £9-95** ENGLISH 1 regular *oblique* **bold *oblique*** £19-95 ENGLISH 2 light *oblique* **ultra *oblique*** £19-95 **EURONARROW** regular *oblique* **bold *oblique*** £19-95 EURONARROW 2 regular *oblique* **ultra *oblique*** £19-95 EVENWRITER regular *italic* **bold *italic*** £19-95 EVE regular *italic* bold *italic* £19-95 EVE Open £7-50 **FORMAL** MEDIUM *ITALIC* **BOLD *ITALIC* ULTRA *ITALIC*** £29-95 FRANKLIN medium *oblique* **demi *oblique* heavy *oblique*** £29-95 FRENCH regular *oblique* **bold *oblique*** £19-95 *GERALD regular* ***bold*** *£9-95* **INTERACTIVE regular *italic*** light *italic* **bold *italic*** £29-95 ITALIAN regular *italic* £9-95 KATIE regular **bold** £9-95 LETTER regular *oblique* bold *oblique* £19-95 **LIZ bold *italic* £9-95 LUBAN bold condensed £9-95** MEKON *regular oblique* £9-95 MELCHET regular **bold** £9–95 MICHAEL regular *italic* **Bold *italic*** NEW SCHOOLBOOK regular *italic* **bold *italic*** £19-95 **NEW SWISS regular *italic*** light *italic* **ultra *italic*** £29-95 OLD SCHOOLBOOK regular *italic* **bold** £14-95 OLD LONDON regular *italic* **bold *italic*** £19-95 OXFORD regular *oblique* **bold *obl*** £19-95 POPULAR regular *italic* **bold *italic*** £19-95 **POSTER bold condensed £9-95** ROYAL regular *italic* **demi *italic*** £19-95 **SKY** demi light **bold £14-95** SULIKOW light medium **bold** £14-95 SWISS CONDENSED 1 regular *oblique* **bold *oblique*** £19-95 SWISS CONDENSED 2 light *oblique* **black *oblique*** **SWISS inserrat *oblique* £9-95** SWISS NARROW regular *oblique* **bold *oblique*** £19-95 SWISS 1 regular *oblique* **bold *oblique*** SWISS 2 light *oblique* **black *oblique*** £19-95 TIMES regular *italic* **bold *italic*** £19-95 WARSAW regular *italic* **demi *italic*** **heavy *italic*** £29-95 **Albert £7-50** Ancient £7-50 Ascot £7-50 **Church £7-50** **Clauch £7-50** **FANCY dress £7-50** **Hotdog £7-50** **Monk** £7-50 ***Tamsin £7-50*** Varsity £7-50 *Sophie £7-50* ARCADIA £7-50 Manuscript £7-50 **Roadside £7-50**

TYPEFACES

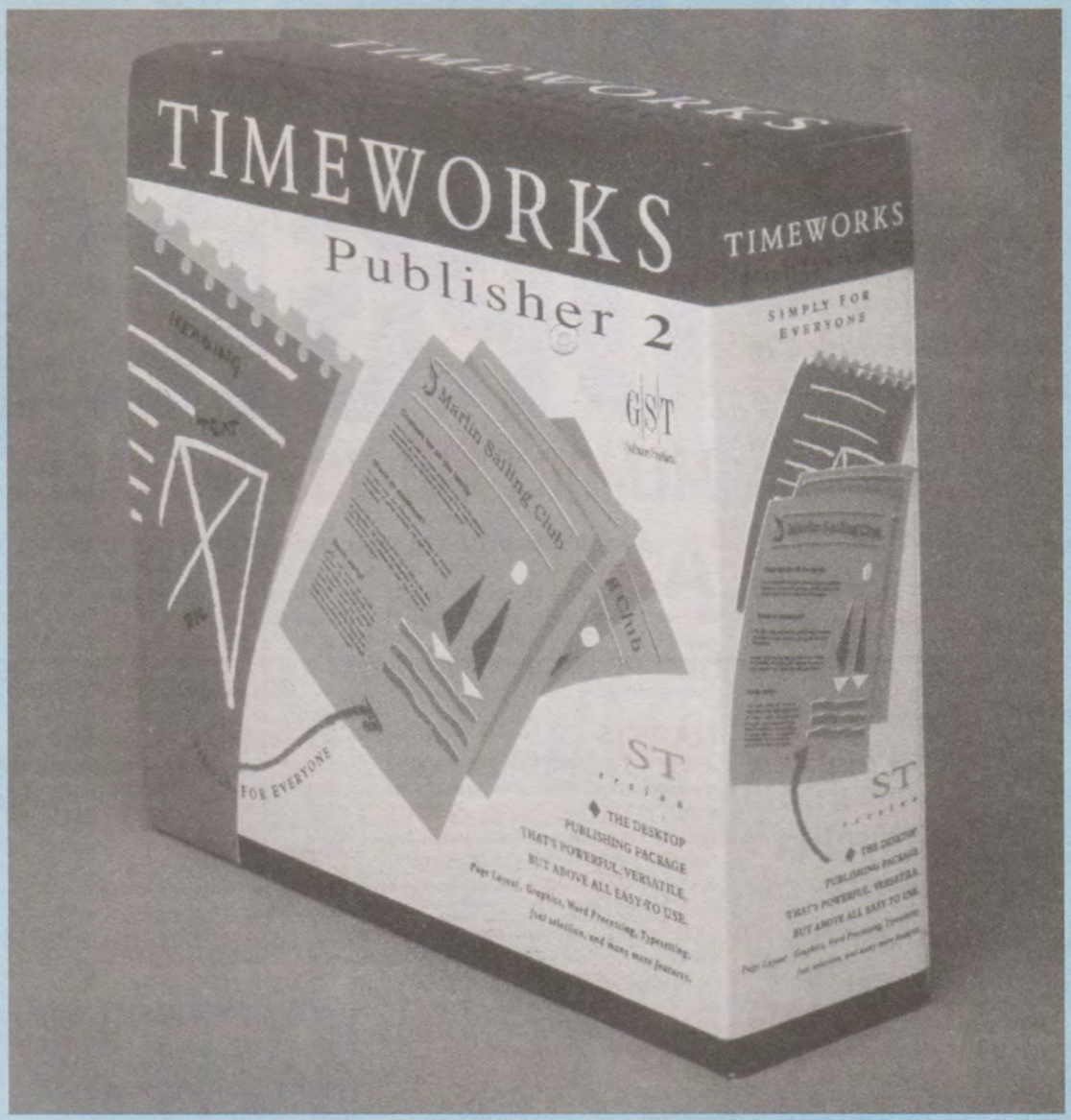
Gate Seven Computers Ltd

6A Gwendwr Road, London W14 9BG. Tel/Fax 071-602 5186

Prices exclude VAT and include carriage

UPGRADE TO TIMEWORKS 2

You've used Timeworks which came free with this month's issue, and now ST Review has teamed up with GST Software to bring you the Timeworks 2 upgrade pack at almost half the normal price



For only £39.89 you'll get the software that turns your copy of ***Timeworks*** into ***Timeworks 2***. You'll also receive the full manual which explains the existing features and plenty of new ones to help you create stunning DTP designs on your ST. It's compatible with all ***Timeworks*** files, so you can breathe new life into your old designs. There's also greater printer compatibility, more file versatility and a host of features such as:

* More typefaces, including Courier, Autumn, Brushwood, Diamond and Sage.

* Text wraparound which flows text around any shape frame, so you no longer have to have to rely solely on square pictures to illustrate your designs.

* Frame grouping, which lets you resize and scale groups of frames so you don't have to go through them individually.

* Many more graphic import possibilities. ***Timeworks 2*** supports TIFF and EPS files as well as ***Deluxe Paint*** and ***PC Paintbrush*** pictures.

* To speed up your work, ***Timeworks 2*** also uses quick keys. This means that, instead of going through pull-down menus, a simple button press does the job.

PUBLISH OR BE DAMNED!

This is the cheapest copy of Timeworks 2 available. Just send off the form with your cheque or postal order, or fill in your Visa or Access card details. Please note that Timeworks 2 requires a minimum of 1MB

Please send me my upgrade to Timeworks Publisher 2 for £39.89 (fully inclusive of VAT and P&P).

Name.....

Address.....

.....

Daytime phone number.....

Visa/Access number.....**Expiry date**.....

Signature

Cheques should be made payable to GST Software Products
Please pay only by cheque or postal order, making it payable to GST Software Products, or by Visa or Access. Your upgrade will be dispatched as soon as possible, but please allow 28 days for delivery. Send your order to: Softline, GST Software Products, Meadow Lane, St Ives, Cambs, PE17 4LG.

UPGRADE FOR FREE!!

The Bitz TOS 2.06 upgrade, part of our prize package.

WIN AN UPGRADE!

MEMORY AND TOS UPGRADES UP FOR GRABS

We've teamed up with Analogic Computers to bring you the chance to upgrade your ST for free. First prize is a one Meg memory and TOS 2.06 upgrade. There are two runners-up prizes of the choice of the memory or the TOS upgrade

Analogic Computers, based in Kingston-upon-Thames, is an official Atari Repair centre. As well as offering a full range of computers, accessories and upgrades, it also offers fixed prices for repairs.

FEATURES

The latest product from Analogic is a switchable TOS 2.06 upgrade for the STE. This requires no soldering and is simple to install, providing full compatibility with existing software. The STFM version is also fully switchable.

TOS 2.06 was reviewed in issue six of Atari ST Review, but if you've not heard about it, this is what it can do:

- It can move files onto, and run them from, the desktop.
- It can define the icons from a range supplied.
- It supports a high density disk drive (if fitted).
- Changes the background colour.
- Reads in a new desktop configuration.
- Improved file handling with a Select All Files option.

ADDED BONUS

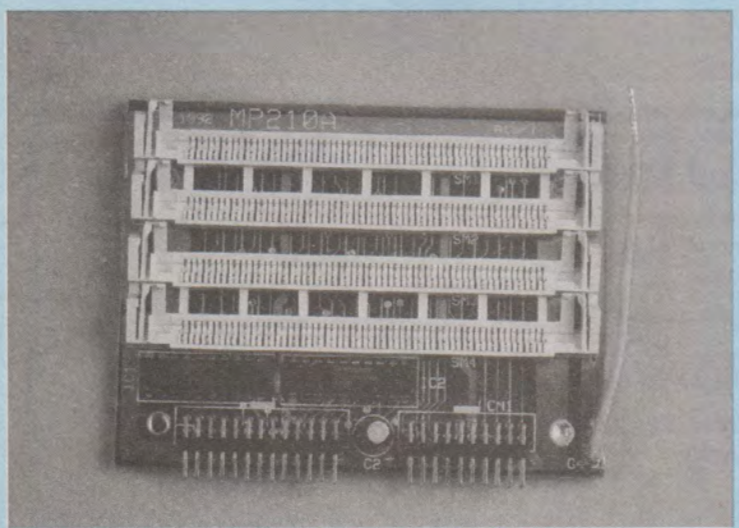
Of course, our winner will need more memory, so Analogic is including a one Megabyte memory upgrade for the winner.

RUNNERS UP

In addition to the fabulous first prize, we've got two runners-up prizes to give away. The choice of one Meg of memory or the TOS upgrade could be yours even if you miss out on the main prize.

STE OWNERS

Winners with an STE will receive the required SIMMS boards (two quarter Meg SIMMS) and STF/M winners will get an XtraRAM Deluxe board, which can be expanded to four Meg by adding SIMM (Single In-line Memory Module) boards. The appropriate TOS upgrade will be supplied.



The XtraRAM Deluxe upgrade board for STF/M computers. The prize includes the SIMMS to take your machine to one Megabyte.

HOW TO ENTER

To enter, simply answer the following questions:

1. What is currently the maximum memory you can have in your ST?

2. What does SIMM mean?

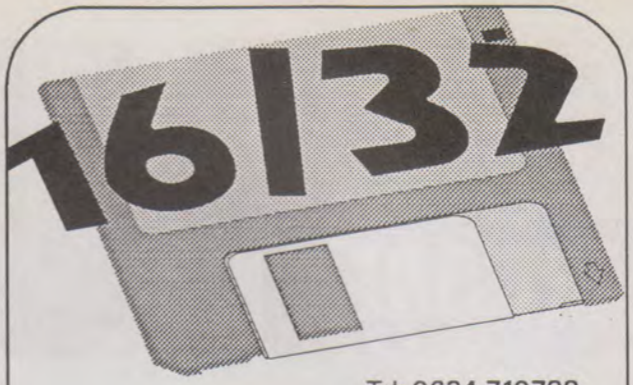
3. On which page of this month's issue is the Analogic advert?

Send your answers on a postcard or the back of a sealed envelope to Upgrade Competition, Atari St Review, 30-32 Farringdon Lane, London, EC1R 3AU, to reach us by 14th December. Don't forget to state which model of ST you own, and if you win the runners-up prize, whether you'd prefer the memory or the TOS upgrade. The competition is not open to employees of EMAP Images Ltd or Analogic Computers. Multiple entries will be eliminated. The first correct answer drawn after the closing date will win a one megabyte memory upgrade and a TOS 2.06 upgrade for their computer (fitting is not included but can be arranged at extra cost if required). Two runners-up will each receive a memory or TOS upgrade. Normal competition rules apply, and the Editor's decision is final.

16/32 are pleased to annouce that we have acquired the entire South West Software Library. SWSL were recognised as being one of the major PD/Shareware Librarys in the UK. So if you want a copy of the latest Catalogue on disk from 16/32 plus Latest Updates plus the superlative SWSL Catalogue send £1 to cover P&P to the address below.

START MAGAZINES

16/32 PDL are pleased to announce that we now have a selection of START Magazines complete with disk.
Only £2 each.



Tel: 0634 710788

16/32
35 Northcote Road
Strood, Kent,
ME2 2DH

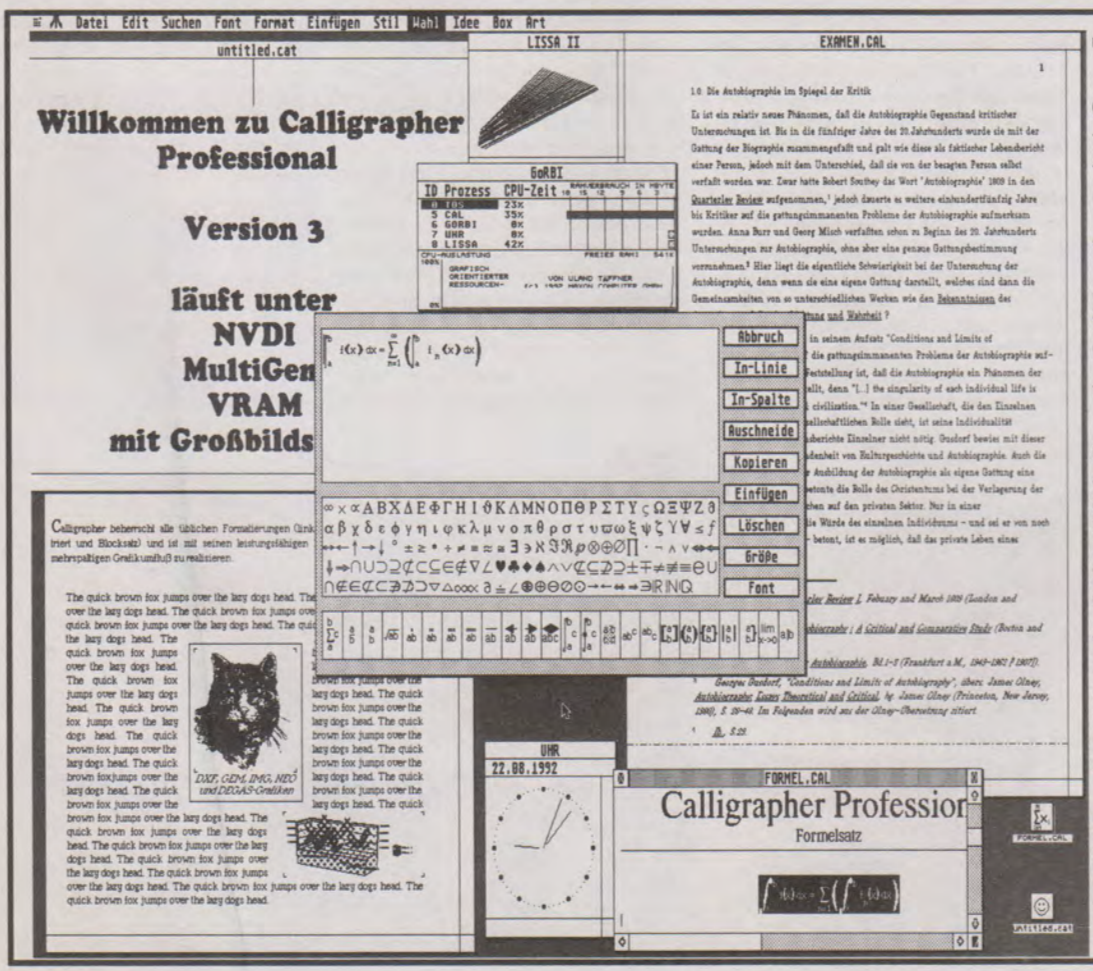
ALL PRICES INC VAT AND P&P. VISA AND ACCESS TAKEN

Maxell Disks

	PRICE PER BOX OF 10
MD1–DD 5.25″ DD	£ 5.80
MD2–DD 5.25 DS/DD	£ 6.00
MD2–DD 5.25″ HD	£ 8.36
MF2–DD 3.5″ DS/DD 1Mb	£ 6.00
MF2–HD 3.5″ HD 2Mb	£12.50

16/32 also supply a large range of Disk Boxes, Mice, and a range of other assorted hardware.

ALL PRICES ARE CORRECT AT TIME OF GOING TO PRESS. E&OE.ALL TRADEMARKS RESPECTED



The message is clear in any language - Calligrapher version 3, a generation ahead of other wordprocessors.

Copies of Calligrapher registered after November 20th 1992 that are not version 3, will be upgraded automatically. Previously registered customers will receive details of upgrades directly.

The screen shot shows Calligrapher Gold version 3, running under MultiGem,with the interactive formulae editor displayed in the centre of the screen.

A brochure on both Calligrapher Professional and Calligrapher Gold is available from WorkingTitle, PO Box 4, Eynsham, Witney, Oxon, OX8 1UD. Tel 0865 88 35 92.

PART ONE PUBLIC

PD libraries are a good way of turning a hobby into a lucrative business. But like any business, there are right ways and wrong ways of going about it. Laura Taylor has some tips to get you started

So you've always wanted to start up your own PD library but don't know where to begin? The hardest part is probably getting yourself established, but if you've got the determination, patience and are prepared for many a sleepless night copying disks, then you're already well on your way to success.

One of the main things to consider when starting your own PD library is finance. There is no point just scraping together every last penny you have, buying a few disks and hoping things will work. There is a vast number of established libraries, some of which have thousands in their libraries, while the smallest have hundreds. Before you start your library, you will need to have a good selection of disks to get you into the market – and this will cost you money.

FINANCE

You will probably find yourself having to take out a loan before you get started. For this you will need a business plan, which we will look at next month. One good tip is to always overestimate. Although you don't want to end up in lots of debt if things go wrong, you have to account for the fact that it can take a couple of months before you really get established. You will have to advertise in computer magazines; customers may be wary of you and only after they see your advert three or four times and become familiar with it will they try you out. Of course, this is not true of everybody but at least if you have overestimated in your finances and have some spare money in the bank you will not find yourself in trouble before you've even started.

BE REALISTIC

When pricing your disks it is very important to take into consideration everything that is involved. There is no point going through the latest PD magazine, finding the lowest price of disks and undercutting them so that you are the cheapest on the market as you will probably end up undercutting yourself so much that you won't make any money.

Companies that can charge less have normally been going for a long time and have lots of regular customers, so they can afford to buy in bulk a lot more, which makes their outgoings cheaper. It is not always true that more people will buy the cheapest item. Many computer users are more worried about things like viruses and would rather pay a reputable company a bit more per disk and know that it is guaranteed virus free.

Every week you should set aside an hour or two every week to do your bookkeeping. This is a very important factor in keeping your business running smoothly and although you could employ the services of a bookkeeper, it's probably only worth doing this if you doubt your ability to keep your own books. Examine your budget each month and make sure you're not over-spending in any areas. Once your bank account is sorted out, ask for statements to be sent to you each month.

You can check them through and compare all outgoings with your cheque book and all incomings with your paying-in book.

GET ORGANISED

The key to any business is organisation. Get a page-a-day diary, and keep a list of everything you have to do each day, including appointments, bookkeeping, and the stock you need to get. It is a good idea to allow yourself 20 minutes at the end of each day to fill in your diary for the next day. Make sure you look back on the previous day's work and include anything that should have been done before but wasn't. Keep track of the names of people that you have to contact and send a catalogue to as this plays an important part in your customer relations. Also, at least once a week, (maybe on a Sunday) allow yourself time to look through any new programs sent to you. Once you have completed each task for each day, tick it off.

One good way of record keeping is to maintain a list of all your customers who have ever purchased PD from you. This would obviously be cheaper if kept on a database on the computer rather than written or typed notes. It is useful to store their name, address and which disks they've bought. Then if every

THE OPTIONS

There are several types of software that fall under the general heading of PD

SHAREWARE: You don't pay anything until you register with the author or publisher, except for copying and postage if you buy from a library. Registration usually brings you a manual and the promise of future updates.

PUBLIC DOMAIN: Donated to the public by its authors. It's absolutely free and there's no copyright on it.

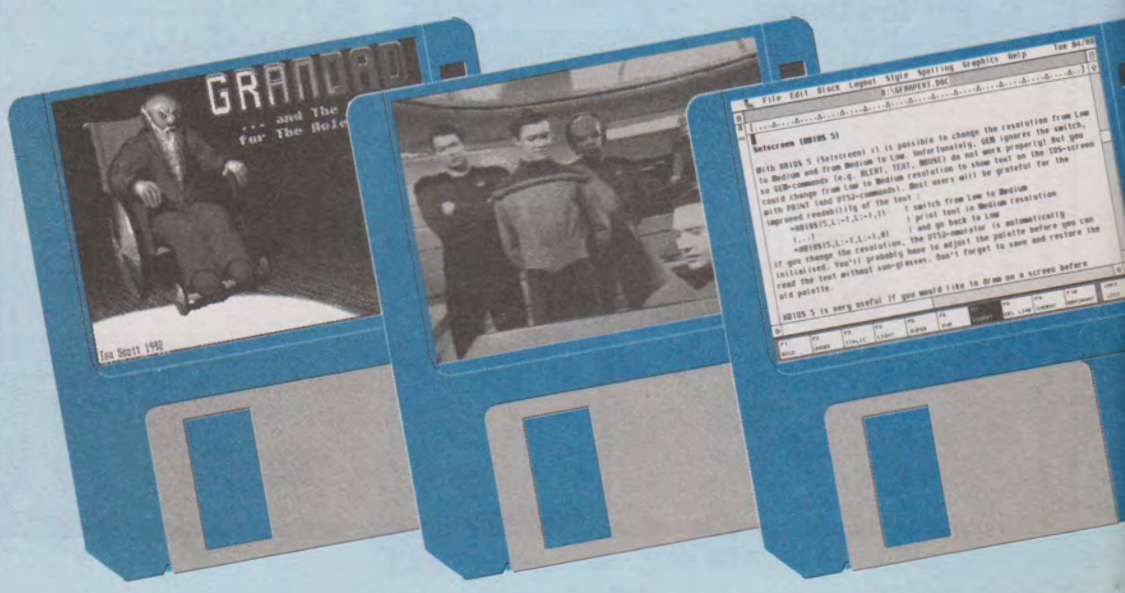
FREEWARE: Software for which there's no registration fee, but for which the author retains the copyright.

CHARITYWARE: If you like the program, you are asked to give money to a charity specified by the author.

LICENSEWARE: A proportion of the price goes to the author.

Buying Shareware in particular has many advantages. You can usually expect personal support from the author and regular software updates.

On top of that, you pay much less than for commercial software because the overheads are so low.



PROPERTY

now and again you find a few that haven't bought anything for a while. Send them a promotional leaflet or a free voucher for a disk.

IN BUSINESS

After your first month you should be able to start a database of customers. These should be checked through every month. Keep a record of where each customer saw your advert; this will help you to establish where your advertising is successful. You can then stop advertising in magazines that have not produced many customers for you, thus cutting down your advertising bill.

NOVELTY VALUE

You will need to make yourself stand out from the other libraries in order to attract customers. There are various ways of doing this, one of which is to specialise. For example, if you have a love for adventures then you could just stock adventures. You could also add to your adventures list by doing disks of solutions. You could advertise for people who have written adventures to send them to you and before long your collection will start to build up. You can do the same for utilities or whatever it is you want to specialise in.

You could also try offering disks for a range of computers (ST, PC and Amiga being the most obvious types) rather than just for one. Although this is likely to be expensive initially, it gives you a wider range of customers.

Something that a lot of PD companies are entering into at the moment is buying and selling second-hand software. Many PD users have old software titles sitting around at home that they don't use any more or new ones that they've got bored with and would be more than willing to swap for some new PD. All you need to do is to make sure that the games are in good condition and that all documentation is supplied.

BACK-UPS

You should always make back-ups of your disks. Use your back-up copies at all times and put the originals, write-protected, away in a safe place. If you then get a virus or a bad sector on your copy, at least you still have your original safely tucked away in its draw.

KEEPING THE CUSTOMER HAPPY

Customer relations are central to your success. Try to guarantee a 24-hour service, for example, on orders placed before 1pm and make sure that all orders are sent out by first-class post.

Presentation is vital. Can you imagine the look on your customer's face if their disks turned up in a torn envelope that was covered in finger prints? Not very pleasant! The best way is to put all disks in jiffy bags, and put stickers on saying 'DO NOT X-RAY – MAGNETIC DATA'. Always double-check the address of the customer.

You may find yourself dealing with the odd complaint – for example, you may have accidentally sent the wrong disk out, but if this happens to you a good way of keeping customer relations going is to replace the disk and put an extra program on it along the lines of the one they ordered.

You will find that people will be much more inclined to use you again if you react quickly to their problems and thus inspire confidence. Keep a check on the customers that do this, just in case you have one particular person who is sending you something back every time he orders.

PROGRAMMERS

Getting programs before other libraries will give you an obvious advantage. To do this, you need to keep your programmers happy

You need to look after your programmers so that they will continue to supply you with programs. One way of doing this is to give them some token of appreciation in return for their contribution to your library. This could be done in a number of ways; you could give them free membership of your library for six months, or a few free disks of PD. Another good way is payment of, say, £10. When you have an established group of programmers, you could hold a programmers' meeting. Arrange everything for them and they could swap ideas and I'm sure the programmers would appreciate this. It would also give you the chance to meet of them in person and find out what is in the pipeline for the future.

MEMBERSHIP

Another good idea when starting a PD library is membership. You could start with a membership fee of say £12 a year (£2 a month) and offer members discounts on disks, updated catalogues every three months, and a monthly magazine (this could include a disk of free PD). You could perhaps run a monthly competition for the person who orders the most PD. You should always keep a database of the members and make sure that renewal reminder letters are sent out to each customer.

£1000 WORTH OF SOFTWARE TO BE WON!!

HOW A

We've been around for a while now, but rather than rest on our laurels, we need to know exactly what we're doing wrong (or right).

To continue giving you what you expect from Atari ST Review, we need your help. Tell us what you think of your favourite ST magazine, and the first 20 names out of the hat will each win a software bundle worth at least £50.

Please help us to help you. We need to know what you expect from ST Review each month. We hope you've noticed the improvements already implemented from the questionnaire in issue one, and would like to take this opportunity to show us the way forward in 1993

HOW TO FILL IN THIS QUESTIONNAIRE

Please try and answer all of the questions as honestly as possible. Don't worry if you can't answer a particular question, there are no right or wrong answers. If you don't want to cut this page out of the magazine, either send us a photocopy or use a plain piece of paper. To be in the draw, please enter your name and address where requested.

Send your completed form to Reader Survey, Atari ST Review, 30-32 Farringdon Lane, London, EC1R 3AU to arrive no later than 14th December 1992.

1. ABOUT YOU:

Name:.....

Address: .....

.....

.....

.....

Age:.....

Sex: Male ❑ Female ❑

2. OCCUPATION:

At school ❑

At college ❑

Full-time work ❑

Part-time work ❑

Unemployed ❑

If at work, what do you do? .....

.....

3. INCOME:

£2000 or less ❑

£2001-6000 ❑

£6001-10,000 ❑

£10,001-15,000 ❑

£15,001-20,000 ❑

£20,000+ ❑

4. WHAT EQUIPMENT DO YOU OWN?

2	❑	STF	❑	520 ST	❑
4	❑	STFM	❑	STF	❑
MEGA STE	❑	STE	❑	STFM STE	❑
TT	❑	MEGA 1	❑	1040 ST	❑

Other (please specify).....

5. HAVE YOU GOT/DO YOU INTEND TO BUY ANY OF THE FOLLOWING IN THE NEXT 12 MONTHS?

	Own	Intend to Buy
Falcon	❑	❑
Second disk drive	❑	❑
Hard disk drive (size.....Mb)	❑	❑

RE WE DOING?

Monitor	❑	❑
(mono/colour)	❑	❑
Printer (type.....)	❑	❑
Memory upgrade	❑	❑
Clock cartridge	❑	❑

Other (specify).....

6. PLEASE RATE THE FOLLOWING BY MARKING EACH CATEGORY OUT OF TEN, ONE BEING NOT AT ALL POPULAR.

News	❑	Coverdisk pages	❑
Screen Scene/Games reviews	❑	Hardware reviews	❑
Software reviews	❑	MIDI Monthly	❑
Tutorials	❑	PD Zone	❑
Competitions	❑	Step By Step guides	❑
Ask The Experts	❑	Letters	❑

7. IN YOUR OPINION, HAVE WE GOT THE BALANCE RIGHT? IF NOT, WHAT WOULD YOU LIKE TO SEE US DO TO CHANGE IT?

.....

.....

.....

Continue on another sheet if necessary.

8. WHAT EQUIPMENT OR SOFTWARE WOULD YOU LIKE TO SEE US REVIEW IN FUTURE ISSUES?

.....

.....

9. WHAT OTHER ST RELATED MAGAZINES DO YOU BUY

	Subscription	Regularly	Occasionally	Never
ST Format	❑	❑	❑	❑
ST User	❑	❑	❑	❑
ST Action	❑	❑	❑	❑

Other (specify) .....

.....

10. IF YOU COULD INCLUDE ONE NEW TOPIC IN ST REVIEW, WHAT WOULD IT BE?

.....

.....

11. HOW USEFUL ARE THE REVIEWS WHEN MAKING A PURCHASING DECISION?

Very useful	❑
Of some use	❑
Of little use	❑
Not at all useful	❑

Have you ever bought anything from the advertisers in this magazine?

Yes ❑ No ❑

If Yes, what have you bought and who from? .....

.....

12. HAVE YOU BOUGHT ANY OF OUR OFFERS? IF SO, WHAT?

Mouse	❑	Memory Upgrade STE	❑
Clock Cartridge	❑	STFM	❑

13. WHAT ELSE WOULD YOU LIKE TO SEE IN THE OFFERS PAGES?

T-Shirt	❑	Binder	❑
Books	❑	Disk box	❑
Mouse Mat	❑	Printer	❑
Monitor	❑	Hard disk drive	❑
Floppy Disk Drive	❑	Other (specify).....	

.....

14. SO FAR, WHICH IS YOUR FAVOURITE ISSUE OF ST REVIEW?

.....

Why? .....

15. WOULD YOU CONSIDER TAKING OUT A SUBSCRIPTION TO ATARI ST REVIEW?

Yes ❑ No ❑

If no, why not? .....

.....

ALL DONE!

THERE, THAT WASN'T TOO BAD, WAS IT? NOW SEND THE COMPLETED FORM TO US AND YOU WILL NOT ONLY BE HELPING US TO HELP YOU, BUT YOU COULD ALSO WIN SOME SOFTWARE! THANK YOU.

WORKING WITH

WRITE YOUR OWN ADDRESS BOOK – PART ONE

Now that you've got to grips with the fundamentals of HiSoft BASIC, you're probably ready to put together a fully-working program. In a comprehensive tutorial, starting this month, Ofir Gal shows you how to create an address book program. . .

Over the next few months I will demonstrate how a fully working program can be created with ***HiSoft BASIC***. Using a modular approach, the program will work by calling subs, each of which is designed to perform a simple task. There are many advantages to constructing a program this way – new subs may be added at a later date, making it easier to introduce new features into the program; bugs can normally be tracked down and the subs created can be used in other programs if needed. As we go along, many more commands and TOS calls will be introduced and fully explained. Saving data to disk, alert boxes and more are on this month's menu, so let's get started. . .

ADDRESS BOOKS AND COMPUTERS

An address book, as far as a computer program is concerned, is a text file divided into many small slots. Each slot contains a name of a person, their address and telephone number. With a 'real' address book we tend to organise names in an alphabetical order, so that when, say, we need the details of Joe Public, we look under P. An address book program need not have entries organised in any order, and a single floppy disk is big enough to store thousands of names and addresses while the ST is fast enough to find a name in a fraction of a second.

If you own a modem, the computer can dial a telephone number for you and will even be able to calculate the cost of the call. If you have a printer, a sub-program can easily be written to print a name and address on a label. The only disadvantage of an electronic address book on your ST is that it doesn't fit in your pocket!

WHAT SHOULD IT DO?

When writing a program like this it's best to set out for yourself the basic functions of the program. In this case the basic version of the program should allow you to enter names and addresses, search for an address and, of course, to load and save the contents of the address book to disk. We can use the sub-programs concept and write a sub for each task:

SUB new_name – this sub will enable the user to input new data.

SUB find – a sub that will search the address book for an occurrence of text.

SUB load_book – a routine that will simply load the address book file.

SUB save_book – this will save the book to disk if needed.

The data (names and addresses) will be held in a text array which

STEP ONE – THE MAIN LOOP

```
DEFINT a-z
DIM book$(599)

CALL load_book                  'first load data

DO                              'this is the main loop
      user$=INKEY$              'check the keyboard and
                                'store result in user$
      SELECT CASE user$         'act accordingly
            CASE=="N"           'by calling the required
                  CALL new_name 'sub program
            CASE=="F"
                  CALL find
            CASE=="S"
                  CALL save_book
            CASE=="Q"
                  SYSTEM        'system quits program
      END SELECT
LOOP
```

STEP TWO – DUMMY SUBS

```
SUB load_book
END SUB

SUB save_book
END SUB

SUB new_name
END SUB

SUB find
END SUB
```

NEW COMMANDS

FNform_alert – This is an AES function that displays an alert box. The function takes two parameters, the first is the default button and the second is a text string. The text string must strictly follow the specified format.

INKEY$ – A function that returns a text character corresponding to a key press.

LOCAL – Used to define arrays that are local to a sub. A local array is erased when the sub is exited and therefore cannot be used outside it.

STATIC – Used to declare local variables.

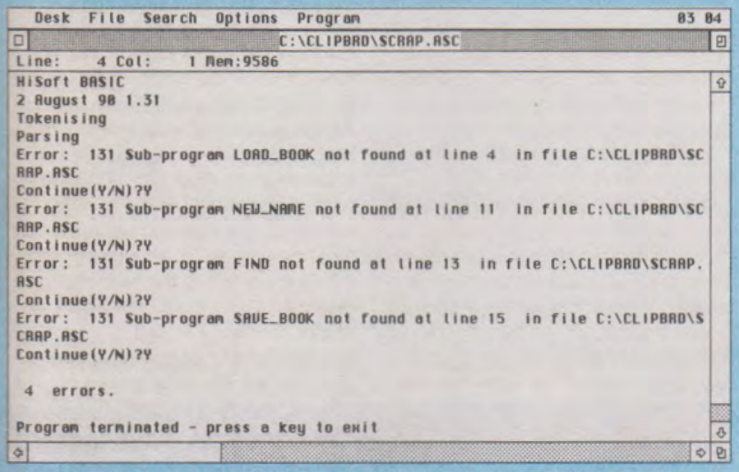
LINE INPUT – Similar to INPUT but allows for additional characters such as commas to be entered.

PRINT #file_number – A simple command that saves a line of text to the specified file.

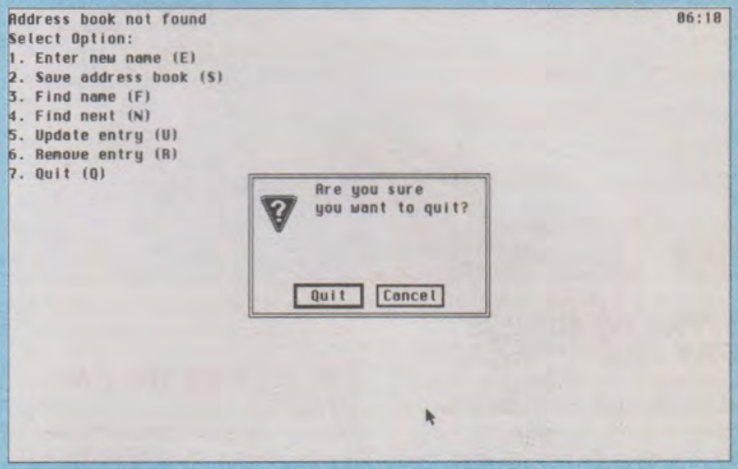
SYSTEM – Simply quits the program.

CALL – Used to call a sub-program that requires no parameters.

HISOFT BASIC



When the compiler can't find a sub it will let you know about it and then abort.



The AES can display an alert box by calling the FNform_alert function. It can have up to five lines of text, three buttons and an optional icon.

STEP THREE

```
SUB new_name
SHARED book$(),lines                'lines is the number of lines in the book
LOCAL tmp$(5)                       'define a 6 elements text array
STATIC i                            'declare a local variable
PRINT "NEW ENTRY"                   'helpful information
PRINT "=========="
LINE INPUT "Name: ";tmp$(0)         'each entry is stored in tmp$()
LINE INPUT "Street: ";tmp$(1)
LINE INPUT "Town : ";tmp$(2)
LINE INPUT "County: ";tmp$(3)
LINE INPUT "Post Code : ";tmp$(4)
LINE INPUT "Tel: ";tmp$(5)
IF tmp$(0)="" THEN EXIT SUB         'in case the user did not enter a name
FOR i=0 to 5                        'store the contents of tmp$() in
        book$(i+lines)=tmp$(i)      'the main array
NEXT i
lines=lines+6                       'increase lines by 6
PRINT "STORED"                      'confirmation
BEEP                                'and a beep are always helpful
END SUB
```

will be shared by all the subs. This method of holding all data in RAM is much faster than having to access the disk all the time – in other words, when the program starts it should load the data into RAM for further access. This means that the size of the address book will be limited by the memory capacity of your machine. A text array with 1,000 elements requires around 12K when DIMed and a further byte for each text character that it contains. A typical address book of 200 entries will require about 35K, and the program itself will run in RAM as well, requiring another 30K or so. This should not be a problem even on a 520ST, which only has 370K of free RAM.

The main body of the program should simply wait for the user to choose the next task, whether he wants to update the book, look for an address or whatever.

THE MAIN LOOP

The program should start with the obligatory DEFINT a-z, then the array definition. If we allow for each entry to have six lines of text then 100 entries will occupy 600 text strings. See step one.

INKEY$ is a BASIC function that scans the keyboard for user input, INKEY$ only returns a single character and so is ideal for this task. Unlike INPUT, it doesn't wait for the user to hit the Return key. Also note the ==, which means the program will not differentiate between capital and non-capital characters, just in case the Caps Lock is pressed. Since the program is looping infinitely, pressing 'Q' will quit the program.

If you try to run the program as it is, the compiler will abort. This is because the compiler looks for the subs you call in the program. To get around this simply add the lines shown in step two.

These subs do nothing at the moment, but they will allow you to develop your program one sub at a time. You can now run the program, it will do nothing of course apart from quitting if you press 'Q'.

ENTERING NAMES

You have seen in previous tutorials how the INPUT statement is used to prompt the user to type something into the program. ***HiSoft BASIC*** offers a range of input commands and the ideal choice for our program is LINE INPUT.

This differs from INPUT because it allows the user to type in commas, semi-colons and other punctuation characters. These may be useful in an address such as 'Priory Court, 30-32 Farringdon Lane', for example.

The sub must share the main book$() array and in addition will have its own local array, just for entering the values.

This is not absolutely necessary, but it helps to make the code clearer. Here we must also decide how many lines to allocate for each entry – one line for the name, four for the address and one for the telephone number is probably right for most cases. Later in this series of tutorials you will see how this can be changed.

Another important value to bear in mind is the total number of lines in the book. When you first run the program this figure is zero, but every new entry will use up six lines. The sub should also increase this number.

Step three shows how the sub should look.

The local array is a temporary array and it will be erased when the sub is finished. Each time that the sub is called, tmp$() is re-created. Notice how the variable 'lines', which is used to indicate the number of text lines stored so far, is updated.

STEP FOUR

```
SUB save_book
SHARED book$(),lines
STATIC i
PRINT "SAVING BOOK.DAT"             'user information
OPEN "BOOK.DAT" FOR OUTPUT AS #1    'file must be opened first
FOR i=0 to lines                    'loop through all entries
        PRINT #1,book$(i)           'print text to disk
NEXT i
CLOSE #1                            'always close a file
END SUB
```

STEP FIVE – THE MAIN LOOP (MK 2)

```
DEFINT a-z
LIBRARY "gemaes"                    'the AES is needed
DIM book$(599)

CALL load_book                      'first load data

DO                                  'this is the main loop
      user$=INKEY$                  'check the keyboard and
                                    'store result in user$
      SELECT CASE user$             'act accordingly
            CASE=="N"               'by calling the required
                  CALL new_name     'sub program
            CASE=="F"
                  CALL find
            CASE=="S"
                  CALL save_book
            CASE=="Q"
                  CALL quit
      END SELECT
LOOP
```

SAVING THE ADDRESS BOOK

Last month we covered the subject of loading files from disk – saving them is not much different.

A file must be opened and then the data is simply printed into it. The sub save_book should, of course, share the main book$() array and the variable 'lines'. See step four.

The file that the program produces, named BOOK.DAT, is a standard text file that can be loaded into any word processor or viewed directly from the desktop.

ARE YOU SURE YOU WANT TO QUIT?

Most professional programs warn the user before quitting and this is normally done by displaying an alert box. To use alert boxes, we must first add a few lines to the beginning of the program and we will also create a sub called quit that will display the alert. The main program should now be as shown in step five.

NEXT MONTH

Next month we will take a closer look at alert boxes and show how they can be used to maximum effect. In the meantime, if you have any questions, comments or ideas concerning HiSoft BASIC and what you have read in this tutorial, please write to us at the usual address, marking your envelope "HiSoft BASIC Enquiries". You may also, if you wish, send in your programs on a floppy disk.

An alert box contains text, buttons and an optional icon which are represented as a text string with the following format:

"[icon][text line | text line][button 1|button 2]".

You can only display one icon, as many as five lines of text and up to three buttons. There are many other restrictions, but most importantly, a text line should be no longer than 30 characters and buttons should not have more than 20 text characters. The icon number may be 0 for no icon, 1 for the ! icon, 2 for a question mark and 3 for the STOP icon. It is best to assign the text to a variable. To display the alert box we use the FNform_alert AES call. This takes two parameters – the first indicates which of the button is the default (the one with a thicker border) while the other is the text string to display. When the user selects one of the buttons the button number is returned and program execution is resumed. See step six.

STEP SIX – THE ALERT BOX

```
SUB quit
STATIC a$,button
a$="[2][ Are you sure | you want to quit ][Quit|Cancel]"
button=FNform_alert(1,a$)           'this displays the alert
                                    'and waits for the user to
                                    'press a button
IF button=1 THEN SYSTEM             'if quit was pressed then quit
END SUB
```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SOZOBON HELP

I would like to add to your reply to Alan Dugdale's letter in the September issue of ST Review.

I suspect that Alan's problem lies in the GEM documentation he is using: the 'addr' bit in the function call for rsrc_load indicates that the function expects to be given an address at which a string (in this case a file name) is located, and since C always passes strings to functions by their address, all Alan needs is: **ok = rsrc_load("MYAPP.RSC");**

In cases where an address is required for something other than a string he should use a pointer (e.g. OBJECT *MyMenu creates a variable to store the location of a menu bar, obtained with rsrc_gaddr).

There is a PD resource editor, MKRSC, which is available on South West Software Library disk 1678. However, HiSoft's ***WERCS*** is relatively cheap (in fact it's about the same price as a game) and comes with a reasonably clear manual.

The portability macros in PORTAB.H date from the days when GEM was a viable operating system for PCs. Because Intel (PC) and Motorola (ST) chips break numbers into bytes in different ways, it was necessary to have code that would ensure that operations that worked on memory locations, such as changing an object's state flags, accessed the right location.

Since GEM is now largely dead on the PC, and had been revised from the ST version anyway, Alan would probably do better to concentrate on the ST. If portability to other machines is important, then try to keep all machine-specific calls in separate functions that return their results to the main program to minimise the effort of conversion.

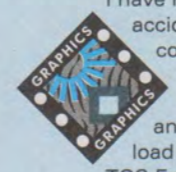
Given that most C compilers cost well over £100, it is certainly a good idea to at least try the PD alternatives, and ***Sozobon*** is really quite usable. I am just putting the finishing touches to a GEM-intensive shell for ***Sozobon*** and although I have occasionally been reduced to chewing the walls and climbing the carpet, the fault has not lain with the compiler. However, I had written a couple of GEM applications with HiSoft BASIC first, so I wasn't a complete novice. The only advice I'd offer to Alan is not to try too much at once. Become reasonably proficient with C before launching into GEM.

Richard Haseltine, Crawley Down, Sussex

Thanks for the information, Richard. There's some very sound advice there. If you do want to start programming, practise with a small program first. Don't try and write that mega-application without sorting out some routines first. For example, if you write a disk utilities package, it will help with programming experience and may well give you the ideas for building it into the main package, or even just adding a save game option. Your small programs can be released into the public domain and you can even gauge reaction from that before you carry on.

Commercial packages are a must for serious programming – in most cases, you can get the technical support from the writers. As you say, programs like Sozobon are adequate for you to find out if programming is for you, but a progression to the more professionally supported programs is recommended.

NEAR-CHROME



I have had a bit of an accident when I was copying a disk. I have written over ***Neochrome*** and when I try and load it, I keep getting TOS Error 35.

I have checked the disk and the program still seems to be there. Can you explain what I have done and can I get ***Neochrome*** back?

E.G. Galloway, St. Helens, Merseyside

It's difficult from the information that you've supplied to tell exactly what it is you've done, but I suspect that you've corrupted the program file itself. It may be that the program appears to be on the disk as the directory still shows it, but the program itself is not complete or even missing. In this case you won't be able to retrieve it easily. Try highlighting the program and clicking on the Show Info option. This will tell you how many bytes there are in the file. The version we have here has 58254 bytes. If this is not what you have, then you will need to get a replacement copy.

TOS 35 has several uses. It is usually an out-of-memory error, but will also occur if a program can't be found. A number of people have come across this error when trying to run the programs from the cover disks without first deleting the RAMdisk. The computer runs out of memory and throws TOS Error 35 to the screen.

PRINT SCREEN

Could you please give me some advice on the following points. I have a 1040 STE and a Star LC200 colour printer.

1. Could you please tell me how to print the screen on commercial games software? I have already tried using the Alternate and Help keys, but they don't work.
2. Could you tell me why on several PD games and a couple of commercial games, when loading and sometimes when playing, the game freezes and the screen goes blank except for about five or more cartoon-style bombs?

Bryn Jones, Corwen, Clwyd

Commercial games software generally can't be printed to screen, since the keys are disabled to stop piracy. There are ways of capturing a screen, but you must remember that there are copyright laws stopping you doing this legally.

In answer to your second question, the bombs that you're seeing indicate errors. The number of bombs that appear on the screen relate to the type of error that has occurred. Usually, switching the computer off for 10 seconds will clear all of the memory and the problem will end. You should do this anyway to avoid the possibility of transmitting viruses between your disks. The issue six disk contained a program called Antibomb. Place this in an auto folder on your boot disk, and instead of the bombs, you will get a dialogue box explaining what the problem is. This won't work for commercial software.

A320 CRASH LANDING?

Being a keen player of flight simulators I am very interested in the recently released Airbus A320 game. However, my local computer shop has told me that I will need a colour monitor to play this game because it updates the

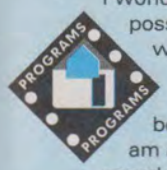
screen display too quickly for a standard television to keep up with. I thought that the TV modulator was as capable of displaying both the low and medium resolutions as a dedicated monitor, although I realise that some clarity is lost.

Could you please tell me if what this shop claims is actually correct. My setup is a 520 STFM connected via the modulator to a colour portable television.

L.J. Russell, Ramsgate, Kent

A320 Airbus does seem to have a few problems with older televisions as the screen is updated quite quickly. It looks like the screen has been changed to 60 Hz too. If you can run normally at this rate, then you shouldn't need a dedicated monitor. However, you may find problems. Try and get your dealer to let you try the program. I know a lot of them won't change software, but he does have the chance to sell you a monitor!

HARD LUCK GEORDIE



I wonder if you could possibly help me with a problem I have. As will probably become clear, I am a not-too-experienced 68000 programmer, so please try not to laugh too hard if my problem has a very simple solution.

Due to a hard disk problem, I have lost a large piece of code that I was working on.

I do, however, still have an assembled version of the program. I thought it would be a simple matter of disassembling the code from within ***MonST***, to give me a copy of my source code.

Not so! I have managed to disassemble the code, but when I try and reassemble it with ***GenST***, I keep getting "absolute addressing not allowed" errors.

I realise that the labels I had been using have been turned into absolute addresses, but is there any way of reversing the procedure? I have tried various ideas based on statements in the manual, but nothing has worked so far.

Also, it took me a couple of hours to find what I believe to be the end of the program from within ***MonST*** to disassemble.

Is there any way that ***MonST*** will show me the end address of an executable file? I tried loading the program as a binary file and using the M0, M1 memory registers (as detailed on page 103 of the manual) to give me the start and end of the file, but this does not work with an executable program.

Surely there must be some way to get the end address of an executable file without spending an hour or two scrolling through the disassembly window in ***MonST***!

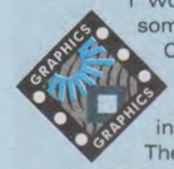
By the way, if you are wondering why I am asking you this instead of HiSoft, the answer is simple. I rang HiSoft and was told that since I purchased ***Devpac*** over a month ago, I will have to pay them £19 per year if I want to get technical help. Since I am a student and my last grant cheque was mid-April, my next one is mid-October (just £800 to last five months), I can't afford to pay almost a week's rent just to answer a question or two.

Dave Palmer, Jarrow, South Tyneside

It is very difficult to regain your original program from the assembled version. The process is really Reverse Engineering, and copyright laws are very hot on it. If you have the power to do this, it is theoretically possible to take any commercial 68000 program and alter it. For this reason, it is very hard to get too much technical information on it (and it takes days anyway!). Your best bet is to rewrite the program.

As far as finding the end of the program is concerned, MonST creates four pseudo symbols within the code. They are text, data, BSS and end. The chances are that the end of your program is actually at the position marked by the data symbol. Try looking there.

PICTURES IN WRITE ON



I would like to offer some advice to Mr. Craig Ferguson who wanted to import pictures into ***Write On***.

The program that he needs is ***That's Snap***, which works as a desk accessory on most GEM-based drawing programs. It will save pictures in the correct format. Any program that saves pictures in .IMG format can also be used.

As for whether he'd be better off with a DTP package to design letterheads, etc., I think that spending over £100 on a DTP package is a bit extreme when he can use a program that he already has in his possession.

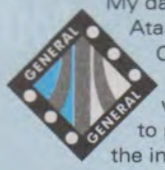
Don't get me wrong, I use ***Pagestream*** all the time and I think that it is a very good program, but for a business it's a bit slow and does not even come close to any WP programs I have had. A full page of text with pictures can take up to 10 minutes to print, a long time if you have a number of them to do. Anyway, now he has a copy of ***First Word Plus*** to use, hasn't he?

As for Mr. Gavin Charles, who wants to use his Stacy on a TV, why not make a lead to connect it to a video recorder? If the monitor socket is the same as the ST, it should be quite simple.

David Calow, Worksop, Notts

Using That's Snap is a good idea, as is using any of the programs mentioned in the original reply to Craig's letter. As for the WP verses DTP argument, he now has both to play with, having obtained Timeworks on last month's cover disks. Check out the review of That's Write 2 in issue six as well for more information on how to get some speed as well as style from your word processor.

WRITE ERROR



My daughter has an Atari 1040 ST and a Commodore printer, but when she wants to print something, the info on the screen says that she must save it first. When she puts another disk in the drive to save the file onto, the info then says "please insert disk" or "check disk drive". However, this does not happen with all programs.

Secondly, the two disks free with issue five of ST Review come up with "write error" when you try to run the programs. Only three of the programs actually work, and she can't print from ***First Word Plus*** because of the first problem.

Dave Grimshaw, Manchester

If the disks used are quality formatted disks with the write protect tabs off, then it looks like your daughter may have a faulty disk drive.

Things to check are that the write protect tab is off (you can't see through it) and the disk is formatted using the desktop. fancy formats can cause problems. If these are both OK, then a trip to the local computer repair shop is in order. Replacement disk drives are available from around £35.

SPELLING IN FIRST WORD PLUS

I do hope that my letter will get your attention. I am an avid reader of your magazine which I think is excellent. Also your cover disks are great. Which brings me to my little problem. I started with my 520 STFM the same time as your mag came on the scene.

I have also purchased a copy of ***HiSoft BASIC***, but I am finding it rather difficult to get to grips with the language.

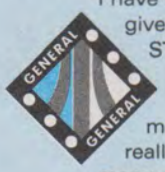
I have loaded ***First Word Plus*** and it seems to be working fine. It is only when I try to load the dictionary that I run into trouble. It is quite possible that I am doing something wrong. When I click on Load Dictionary, I eventually get a file selector. Could you please let me know what I should do next. I do understand that I still have a lot to learn about the ST.

Hoping you can help.

Robert Talbot, Ballymun, Dublin

The File Selector is for you to load a supplementary directory if you have one. When you check the spelling of a name, you have the option to add it to the dictionary file. This, and others, are stored in memory until you leave the program. You are then presented with a dialogue box asking you for a name to save the new words to. The extension to this file is .SUP. If you have no extra words to add to your dictionary, just click on Cancel on the file selector and proceed as normal.

NEW GAMES ON AN STFM?



I have recently been given an Atari 520 STFM. However, I have been told that this machine is not really suitable for many games. I am particularly interested in getting ***Graham Taylor's Soccer Challenge*** and ***The Manager***.

What do I need to do to my machine in order for it to be able to use both of these games?

I would also like to know why the computer I have will not play games which are for the Atari ST. Do I have to find games specifically for the STFM?

I would be grateful for any help you could give me.

G. Lambert, Romford, Essex

I don't know who you've been talking to, but there should be very few programs that will not run on your STFM. I have one at home of 1986 vintage, and have not come up against anything that will not run.

There are, however, one or two games that won't run on all machines, but these are few and far between.

When buying a new game, you should look at the label. It will tell you what the minimum requirements to run it are. Most, as I say, will run on your machine. There are some newer games around that require a minimum of one Megabyte of memory, so an upgrade is certainly worth considering.

It is possible to upgrade the TOS version in your machine and TOS 1.4 is a good bet for the internal ROM set. TOS 2.06 is also available and, being switchable, will ensure continuing compatibility.

As ever, it's your chance to have your say. We don't have a vetting policy for our letters so you can just let rip with whatever you think. Contentious issues, suggestions or even constructive criticism – tell the ST world what YOU think! You could win £50 worth of software if your words of wisdom are chosen as Letter Of The Month.

LETTERS

CHRISTMAS FEAST

LETTER OF THE MONTH

I am writing about the glut of games that normally come out from now until Christmas. I'm complaining in advance about the quality these games will have, if last year's efforts are anything to go by. We are in for more rushed games so that they will be out in time for Christmas which will lower the standard of them considerably.

Also it seems that at this time there are no original games coming out either, although I expect that there will be stacks of cutesy platformers, horizontally scrolling shoot-'em-ups based in space and racing games by the ton.

I praise Rage and Sensible Software for trying to bring out games which have some originality – for example Striker, where they took soccer and made it into a fast-paced and frustrating game with long-lasting appeal.

To find real originality, you have to look at PD games where ordinary people are writing fun and original games which will beat the big companies. If companies want to write fun and original games, ask ordinary computer owners. They will tell them what they want, and they should listen or their pay packets will cease to exist!

On a lighter note, I think that ST Review is one of the best magazines out today since you aren't just business or just pleasure. Your step-by-step guides make sure that even the most incompetent person can make a decent job of it. Keep up the good work.

Chris Freestone, Kempston, Beds.

Your concern about the lack of original software is something I think every ST gamesplayer should echo. Luckily however, this time of year usually sees a sudden flurry of activity on the games front and this Christmas will be no exception with the impending release of some stunning original titles, including Legends of Valour, Reach for the Skies, Sabretooth from Krisalis, Ween and the amazingly playable Archer Maclean's 3D Pool. If you add to this some of the less original licensed titles like Streetfighter II, Lotus III and the like, then you're left with an extensive selection of releases! Just watch out for next month's Yuletide round-up!

SOUND ADVICE

First of all, let me say how much I enjoy getting hold of my monthly copy of ST Review. It really is the best magazine available for people with more than just a games interest in the ST.

This is, however, not to say that the magazine is without fault. I can understand a few typos and spelling errors in the first few editions, but the person responsible for final checking in issue 6 should get his or her wrists firmly slapped. Some of the screen shots seem to be very strange too, with all the text greeked out of all recognition. Thankfully, this hasn't been too prevalent in recent issues.

I hope that you will keep the current balance of games and serious coverage, as I find that most other magazines seem to be 80 per cent games these days.

I hasten to add that I'm not one of those anti-games people that write in – I enjoy playing games. I also enjoy using my fairly large collection of word processors, spreadsheets and programming languages.

Your product tests are a well thought-out idea. I wish more magazines would actually USE the serious software that they give prestige reviews to rather than just loading them up and whizzing through them in one afternoon. I must disagree with David Gunby's letter (issue 6) about your printer round-up. I found it most interesting and used it in my decision to buy a Canon BJ10ex printer which is a marvellous little beast.

I also enjoy the Public Domain section of your magazine. As with other areas, the coverage is well split between applications and games.

You recently gave an Essential Buy award to a game written by a friend of mine and, as you can guess, he probably bought about 20 issues of the mag!

Your games reviews are generally a lot more informative than your competitors' in that you actually seem to be able to string sentences together without making them sound so gut-bustingly juvenile. Unfortunately, your review of ***Sensible Soccer*** appears to have a major flaw in it. You stated that, for one Meg machines, there are lots of crowd chants and various other samples. This does not happen on MY one Meg ST. All I get are two samples (crowd roar and crowd woo when I near miss a goal) and a funny clickety click noise which is supposed to be the sound of a foot hitting the ball.

The promise of these extra sounds was one of the reasons that I bought the game in the first place, and to find them missing having read in your magazine that they exist makes me rather annoyed. From the other people I've spoken to, this is the case with them, too.

Either we have earlier versions of the game or you have mixed up the ST and Amiga versions.

Lastly, I tried to send you a letter through the NeST ST Review conference only to be told that it had been closed down due to lack of interest on your behalf. Any comments?

Colin Campbell, London, N9

We're no longer on NeST – there was not a lack of interest on our behalf, but during the first few issues of the magazine we seldom had time to participate fully. We do, however, take a healthy interest in Comms.

If anyone would like to include an ST Review conference on their system, then just give us ring on 071 972 6700.

In the meantime, we do have an ST Review account with CIX and you can leave mail (including Letters and Ask the Experts) for us on ST Review – it's checked on a daily basis which shows you just how interested we are!

As to your other points, RJ at Sensible Software did the extra samples and put them onto our copy of what Sensible Software

told us was the finished product. They were okay on our Mr Dillon's ST (which is 2 Meg) but they gave a number of problems with the operating system on a 1 Meg, so several samples were dropped at the last minute. However, the gameplay on the ST version was tweaked and plays better.

In fact, if two people who owned an Amiga and an ST were judged to be of the same skill level, then the ST player should be easily able to beat their counterpart.

MORE ON PAGESTREAM

As a result of Alex Bond's response to my letter in issue four about bugs in ***Pagestream 2.1***, I would like to point out that I have recently upgraded my STE to two Megabytes and purchased a second disk drive so as to meet the "recommended requirements" of the program (which none of the magazine reviews stated). Although the second drive eliminates the problem of the ST crashing when it can't find certain font file, the program still has problems "bleeding" text objects and Compugraphic fonts at large sizes or in landscape mode. The program continues to crash occasionally for no apparent reason.

My ST is the simplest of configurations with no accessories installed, so the point I was making is still valid. I still don't believe that such programs are tested well enough and although the new version 2.2 solves many problems, I don't see why I should have to fork out more money just to get a fully robust program which I paid for in the first place.

Do software producers fail to fix bugs so that the public will be continually forced to buy upgraded versions?

Saying this, I realise that this issue isn't specific to ***Pagestream*** and I do agree with Alex that, despite the bugs, ***Pagestream*** is an excellent program and as good as Apple Mac and PC counterparts I've seen. I'm shocked when I hear of schools, churches and community projects buying Macs to produce newsletters and magazines despite the fact that they have limited cash. Macs have their place in professional publications like ST Review, but for amateur use, the ST has all the power necessary without the disadvantage of the high price.

With the advent of the Falcon 030 and its increased power and colour DTP capabilities, Atari will have a machine which rivals low-end Macs at £1000, but the Falcon must make a name for itself in a DTP world obsessed by the Mac before it's too late.

Commodore won't have a contender for the Falcon until 1994, so while it dominates its market let's see more support for DTP than we get with the ST. With the launch of the Falcon, you should divide the magazine into sections along the lines of MIDI Monthly, with a section for DTP. Although each section will not be immediately popular with everyone, they will promote the Falcon's greatest potentials, whet appetites and help win over whole new audiences. If the ST's launch is anything to go by, those looking to buy a computer will look at ST magazines and if the only feature you publish on a regular basis is Screen Scene, then like the ST, people will associate the Falcon solely with games and in turn, we will end up with a PC/Mac monopoly over serious software.

Graham Stewart, Perth, Scotland

You may have noticed that we split the magazine up into sections already – MIDI, ST Buyer, Product Tests and a host of Tutorials which all cover the serious side of the ST in depth. I'm frankly amazed however that you feel you should tell us that we shouldn't treat the Falcon as a game machine. One would hope that you're getting us mixed up with some of our more trivial competition.

That aside, I would seriously question the Falcon's ability to penetrate the Macintosh market as it's far too well established in the professional field.

As far as the serious applications of the Falcon are concerned, it's up to companies to produce the software that will show off the full potential of what is, a high specification multi-media machine.

DEAD SOFTWARE!

Congratulations on a truly user-based magazine, which actually meets the needs of STers. It really is good to see type-ins again. Please, please can you help me? Through sheer stupidity, I've zapped the boot sectors on (probably) both disks of my copy of Xenon II Megablast. It won't run. I believe that Mirrorsoft were the publishers who have gone to the big soft shop in the sky. Could you or any reader advise me as to whom I should contact to get the disks replaced?

I must pay special thanks to the Atari Helpline for their prompt and helpful service in replacing my copy of ***HyperPaint*** and ***Blood Money***, which I also somehow managed to zap. This should serve as a warning to other STers. DON'T use a virus killer on commercial games. But you knew that already didn't you?

R Stammers, Armley, Leeds

Unfortunately, if you damage a games disk, the manufacturers are under no obligation to replace your disks.

However, there's never any harm in trying – and in this case, Renegade will replace the disks for you. If you send your original disks back to them at Renegade, Unit C1L, Metropolitan Wharf, Wapping, London E1 then they'll return new disks to you.

There's also a lesson to be learnt here. Most commercial games do have executable boot sectors and most virus killers will just look for this without differentiating between the various types.

The only virus killer that MAY actually be able to help with infected games is Universal Virus Killer 5.5. And even then, be prepared to damage some of the games that you attempt to repair.

UFOS ON DISK

I am writing a disk magazine about UFOs and I'm looking for people to write on the subject.

The first issue is almost complete. It tells of the involvement of the CIA, FBI and NASA and gives details of some of the documents released under the Freedom of Information Act in the USA.

Lastly, if anyone would like to write for the magazine or would

THE MOMENT OF TRUTH

Are you to be the proud owner of a new smart modem, a Forget-me-Clock cartridge, a copy of Cubase Lite or Timeworks 2? Find out here. . .

In Issue five to be precise we had a whole bunch of goodies to give away. Here are the winners and answers.

MIDI MONTHLY

Dipping into a very large bag, we selected two winners. It seems that a lot of you are interested in music. One reader apparently spends 85 hours a week on it!

There were four questions to answer, although only two had right or wrong answers. They were:

1. Cubase Lite has 16 tracks, and
2. There are four quavers in a minim.

The two winners are:

Peter Thoms from London, SW4 and Graham George from Cardiff.

TIMEWORKS 2

Five copies of Timeworks 2 were up for grabs. The answers to the questions were:

1. There are nine typefaces available.
2. GST is the publisher of Timeworks 2.

Most of you would like to provide local services to youth clubs and restaurants, but the winners came up with ideas like producing a children's story book and promoting a community radio station. The winners are:

D.B. Holden, Cheltenham, Glos; Joan Tomkinson, Mansfield, Notts; Jamie Wooldridge, Rugby, Warks; D. Corking, Derry, N. Ireland and G.P. McKeever, Hemel Hempstead, Herts.

SMART ONE

Be a Smart One, we said, win a Smart One, and you responded. Three questions were asked this time and the answers are:

1. The Smart One can receive 240 characters per second.
2. The normal horizontal resolution of a fax machine is 200 dpi.
3. The initials BBS stand for Bulletin Board Service.

Then we asked you who the first fax recipient would be and why and it seems that most of you would send us a fax to thank us for winning. That particular pleasure falls to:

Jeff Edgington from Barrow-in Furness, Cumbria.

We look forward to receiving the fax, Jeff!

CLOCK THIS!

Many of you fell into a trap with this one. You forgot to turn the computer off before connecting the Forget-Me-Clock II to the ST via the cartridge port! You all knew that the clock setting program was called FMCII.PRG, though.

The five who got it right and were first out of the hat were:

Roy Heley, Dover, Kent; Carole Gray, Croydon, Surrey; Paul Osborne, Plymouth, Devon; R.M. O'Gara, Preston, Lancs and S. A. Hutchinson from Birmingham.

Congratulations to all our winners. Prizes will be on their way to you soon.

like a copy, they should send me a disk and SAE and issue one will be sent to them.
Steve Gunn, 16 Leverton Green, Clifton Estate, Nottingham, NG11 8BS

Is something up there? This would seem a good way to find out. Or if you have any personal experience of extra-terrestrial encounters then why not send the details off to Stuart? Who knows, we might even print some of his findings in the magazine.

BOOMER ZOOMER

Could you please tell me where I can get hold of the Zoomer? It is by Euromax and advertised in your magazine, so I would be grateful to you for their address, or the address of someone who sells it.
Fred Flannery, Cork, Eire

As you're no doubt a bit of a flight fan, I've tracked down Euromax's phone number which is all you need to order the £29.99 yoke style joystick. They have a full mail order service that will even take Access and Visa orders on 0262 602541

ACCESS FOR THE DISABLED

Just to let you know how pleased I am with my 520 ST. As I am a disabled person, I have more time to use my computer every day and it has been most reliable.

It is much clearer for me to use than the Amiga and I think that the games are better as well.

I have had my ST for nearly two years and I would not change it for anything – except another ST, of course.

Keep up the good work with the magazine. Thank you.
Simon Crompton, Worthing, W. Sussex

It's always a great feeling to know that there are happy punters out there in the ST world. Whilst I may not completely agree that the Amiga games are inferior, I certainly do agree with your comments on the ST being far more logical (and therefore easier) to use than any Amiga.

STE OR FALCON?

At present I do not own an ST but intend to buy one shortly. I was going to buy a 1040 STE Family Curriculum pack and, with this in mind, have been collecting all of the major ST magazines. But, with the announcement of the imminent launch of the Falcon, I am in two minds as to which to buy.

Firstly, will the cover disks that I have collected work on the Falcon as I have a lot of programs that I am eager to try out and secondly, as the computer will be used by the whole family including my four boys, would the STE be better value?

Whichever machine I decide on, I'll also be buying a monitor and a printer, but I can't decide which printer to buy. I've narrowed it down to either the Canon BJ10EX or a 24 pin printer of similar value. Will you be doing a 24 pin printer test as you have already done with the 9 pins and the bubblejets?
Alan Beal, Norwich, Norfolk

There's a little bit of a problem here as you don't indicate what your main use for the computer will be. So I think you need to just look at what you're main use will be.

Atari claims that the Falcon will be at least 90 per cent compatible with ST software although at the time of writing I've not seen any ST software run on the machine.

What I have seen, however, are a couple of Falcon games which are currently being developed. Space Junk by Mirage is probably the best I've seen so far and really shows the potential of the Falcon.

At the end of the day though, you're not going to see the Falcon until the new year and then you'll be talking about quite a price difference but some awesome computing power. With four boys to entertain though (not to mention feed!) I'd be tempted to buy an ST which has a multitude of software already available and then think about upgrading to a Falcon once you know a little more about it!

CORRUPTED BY DISKS

I have read with great interest your section on screen destruction programs in the last issue, and I have noticed that some of the names bear a striking resemblance to the filenames of a lot of the items in the Corrupt Me!! folder on the cover disk.

I would badly like to get my revenge on the GEM Desktop by using these, but I can't seem to run them because they have strange extenders like .RSC and .ACC. Am I talking to my ST in the wrong language?

Do I need to run them through another application? Did you just put them there as a joke? Does it need a good kick in the you-know-where? (Please give details, my mouse would like to know!)

I think ST Review is a super magazine, but I have to agree with Barron Finn, in that S. Whalley lives up to his name, All of this talk of the Amiga Workbench being "far superior" to Gem (Letters, issue five) is a load of rubbish. I was using my cousins A500 only yesterday and wouldn't give you tuppence for its crummy Workbench. OK, so the icons have pretty pictures on them, but at the end of the day, as regards user friendliness, you really have to hand it to GEM. In any case, how many people buy a computer for the desktop?

However, I wish I could say the same for ***Lemmings***. The sound on the Amiga version makes the ST look like a Spectrum! What went wrong?
R Blandamer, Tring, Herts

Firstly, the use of the programs in the Corrupt Me file are documented on page 18 of that issue. along with loading instructions. For your information, .RSC files are not executable. They contain the box information for the main program.

Programs with the .ACC extension are accessories and are run by placing them in the root directory of your boot disk (not within any folders of the disk that's in your computer when you first switch it on). Make sure that you have a 'clean disk' handy in case you can't get out of any program you load.

We here at ST Review refuse to be baited into the ST/Amiga argument. If we didn't prefer the ST, we wouldn't be producing a magazine for it, but that does not mean that the Amiga is bad. All it means is that we've chosen one or the other. Could it be that the machines are similar that causes all of the bitchiness?

Sorry that we couldn't answer your other questions here, but they have been placed in the file for Ask The Experts for consideration.

TIMEWORKS PROBLEMS

Having purchased the November issue of your magazine, I eagerly anticipated using the excellent ***Timeworks*** package which was provided on the cover disks. Unfortunately, the backup and installation process was much more difficult than was informed in the instructions.

The following points illustrate the difficulties that I had with it.

1. Your backup 'Step By Step' guide on page 18 simply does not work. I formatted my blank disk both single and double-sided, but the backup failed on both occasions and gave me the message that my destination disk was not the same format as the ***Timeworks*** disks.

2. On page 17, the installation instructions indicate the need for three formatted blank disks. This is incorrect as four are needed. During the installation process you are requested to insert the Overlays disk. There is no mention of the need for such a disk in the instructions.

3. All in all, I attempted to install the package on six occasions from the original disks before I was successful (I think!).

One further problem I had was that disk two was damaged (metal strip warped) and I had to return the disk to PC Wise Ltd as instructed.

I think you would agree that your readers will be frustrated in attempting to install the package, particularly when prompted for their Overlays disk.

Despite the difficulties I have experienced, ***Timeworks*** is an excellent package and Atari ST Review should be congratulated for their efforts in both securing this for the November issue and in providing an excellent magazine for ST users. Keep up the good work!
Tom Halton, Co. Down, N. Ireland

Well, Tom, you have been unlucky, but I'm pleased to say that your problems are easily rectified. Firstly, the backup. We had to use an extended format to get all of the Timeworks material onto the disks, so the normal method of backing them up will not work.

On this month's coverdisks you will find a program called Diamond Format. This will enable you to format a disk to 10 sectors per track and 80 tracks (normal format). You should then be able to copy the disk. If this fails, then format the disk as instructed and copy the files across.

Secondly, the Overlays disk is only requested if you are installing the program onto a single sided disk. If you change the information on the installation program to "One 700 Kb floppy", you should find that an Overlays disk is not called for.

The problem with the disk should be sorted out by PC Wise very quickly.

With so many disks being duplicated and distributed, it is inevitable that the odd one will cause problems.

Send your letters to Points Of View, ST Review, 30-32 Farringdon Lane, London EC1R 3AU. The sender of the best letter each month will win games or application programs of our choice to the value of at least £50. Please note that personal correspondence cannot be entered into, but we will try to print your letter if we can. We reserve the right to edit letters where necessary without altering the context.

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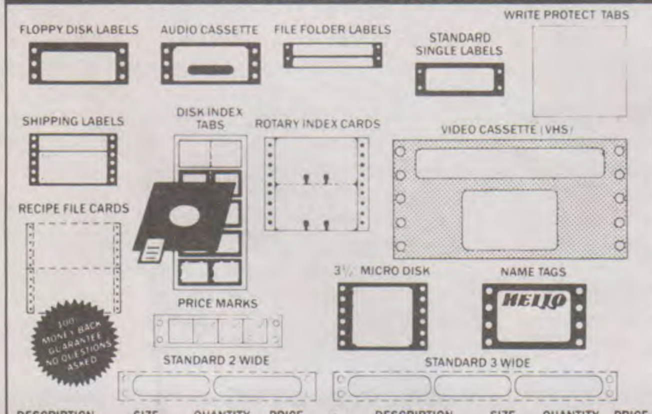

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LEARN THE LINGO

ST JARGON EXPLAINED

This month, to coincide with CyberStudio on our coverdisks, we take a look at some common terms associated with animation and graphics

ANIMATION
Creating a series of images and then running them in a sequence so that they give the appearance of movement.

BLUEING
Using a colour that will not show up in your animations to produce registration marks or dots. Each subsequent frame of animation can then be lined up so that they animate smoothly in the finished sequence. It comes from the offset printing term, non-repro blue, a special pen that will not show up when photographing artwork to make into film for printing presses.

CROP
Cutting a picture to fit into a given area, or to show only certain elements of it.

DESKTOP PUBLISHING
This term covers the whole process of designing a document for printing using a computer. In the days before DTP, pages had to be laid out by hand using the 'cut and paste' method. This was long, slow and wasteful of resources. The new computerised process allows tremendous flexibility.

ERROR MESSAGES
Not very well documented, error messages occur when something is wrong. It may not be a complete disaster. For example, an 'out of memory' message may be cured by removing some accessories at boot-up.

FRAME
Each individual picture drawn in a sequence is called a frame.

GREYSCALE
Instead of using a range of colours, greyscale, as the name suggests, uses a mono range which goes from black to white. Most scanners can handle 256 different shades of grey. A better image can be created on paper using this method as most standard printers will printer either black or nothing (white). The density of black on the page creates the grey tones.

HALFTONE SCREEN
The method by which a photographic image is presented for print. Halftone breaks the image down into black and white dots of varying size to give a tonal representation of the picture.

ITALIC
This is usually used to accentuate words in text. It is a typeface where the letters lean to the right.

JUSTIFIED TEXT
Justification is used to align text by adding spaces or part spaces to the text so that it lies flush against the left and right side of the column. Text can be ranged left, which means that it lines up to the left and is ragged on the right, or ranged right, the opposite. It can also be centred, which means that the column will be ragged on both sides.

KERNING
Altering the space around the letters so that they take up relative and not uniform space. For example, an 'i' does not occupy the same amount of space as a 'w'.

LEADING
(pronounced 'ledding') This is a printing term meaning the space between two lines of text. It derives its name from the old manual days of typesetting when lead would be used to create space between lines of metal text.

MENU BAR
At the top of the working screen, there is a line of words showing the options available to you. Run the mouse to the one you want and a further menu will drop down. Then select the option you want to run by highlighting it with the mouse.

NETWORKING
Connecting your ST to a friend's using a lead is a simple form of Networking, using one machine to control or serve others. The Falcon has a new socket on the back marked "LAN". This will make Networking easier.

OVERLAYS AND UNDERLAYS
Creating a background for your animation is called an underlay. All of your animations will go over the top of this. An overlay can give depth to your work by having the animation travel behind it.

PATH
In animation terms, you can set a predetermined route for your character to follow. This is called a path. By setting this you can design more complex animations easily.

QUIT
The command used by a lot of programs to exit.

ROOT DIRECTORY
This term refers to the contents of the first window opened on a disk. An accessory needs to be in the root directory of the disk that you boot up with, otherwise it will not load.

SERIF
Small tails sometimes used in fonts are known as 'serifs'.

TWEENING
This term comes from the early days of cartoon animation when a master animator would draw the main movements of a character and the apprentices would fill in the gaps.

UNTITLED.DTP
Timeworks will always start up by naming your document with a dummy name. This is changed by using the Save As option when saving for the first time.

VECTOR GRAPHICS
These are a set set of commands defining lines and curves as opposed to bitmaps. These can be resized or stretched without losing definition.

WIDOWS
The tail end of a paragraph separated from the rest of the text.

X-CONTROL
Atari's new configurable Control Panel. Allows you to edit the environment for comfort in terms of colour, mouse response, keyclicks, bell and other options. This panel can configure other programs using files called CPXs.

ZOO
A method of compression of data that is usually used to send programs via the telephone lines when using a modem.

CAD
Computer Aided Design. Any application that is used to design an end product can be described as CAD. ***CyberStudio*** is an example of Computer Aided Design in action.

RAY-TRACING
Using mathematical formulae, it is possible to get a very realistic picture showing reflected images. This can take a long time to produce, in fact, in certain cases you will find that it takes many hours, but the results are very often worth the wait.

WIRE FRAME
Showing just the edges of an object takes considerably less time than redrawing a solid image. Wire frame drawings can have hidden faces where they are obscured by other parts of the object or they can show the whole thing.

CHARTS

Find out what's hot and what's not this month by scanning the latest charts. You decide what the best programs are by voting with your cash. . .

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TOP 10 ADD-ONS

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10 Quickjoy Junior	Spectravideo	£6.99

TOP FIVE UTILITIES

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3 Deluxe Paint	Electronic Arts	£49.99
4 3D Construction Kit	Domark	£49.99
5 Master Sound	Microdeal	£39.99

National charts supplied by Microbyte.

Wherever there is news, wherever there is controversy, there will always be opinions. And this is the place for people to air them....

OPINION

Where do you buy your equipment? We asked specialist dealer Silica Systems and the multiple chain Dixons why you should buy from them. Here's what they said. . .

IF YOU HAVE AN OPINION THAT YOU WANT AIRED, THEN DROP US A LINE AT: OPINION, ST REVIEW, PRIORY COURT, 30-32 FARRINGDON LANE, LONDON EC1R 3AU

EXPERTISE COUNTS

Is a specialist shop always the best place to go to buy a new computer or game? Specialist supplier Silica Systems gives us its views

SILICA SYSTEMS

Silica has shops in Sidcup and London. They claim to offer the service and technical backup that are only possible from computer specialists.

Technical support, competitive pricing and direct access to the latest product are priorities to computer users, and are all areas in which most specialist dealers such as the Sidcup-based firm Silica Systems excel.

Whereas large multiples have increased display space for software and limited ranges of hardware, they fall behind somewhat in staff training. Some of the larger chain stores employ technical experts, but their work is geared towards selling complete systems rather than tailoring components such as keyboards, monitors and modems to a customer's specific needs.

At Silica, staff are individually trained and are consequently able to recommend other sources in the unlikely event that they do not have the answer.

Chain stores may have a massive market presence, but computer owners continue to have a need for individual technical support and bags of help. As long as this holds true, they'll keep coming to the experts and companies like Silica will always have the edge.

HIGH STREET COVERAGE

There's a Dixons store in nearly every high street. But why should people buy from them?

Dixons

Branches of Dixons can be found in nearly every high street. Are they worth visiting, or do the smaller retailers win the day?

Dixons is the UK's largest specialist retailer of consumer electronics and offer an extensive range of goods through over 850 stores nationwide. Of these, over 200 Dixons and, more recently, Currys stores provide increasing ranges of computers through business centres or computer supercentres. Such a network of stores provide customers who would not feel comfortable dealing with the specialist trader or mail order trade press with an opportunity to visit a familiar high street store to select products that fit his (or her) individual requirements.

The staff are highly trained and approachable and will provide all the expert help and advice that the customer needs to make the right choice. In addition, customers are given the opportunity to try out the unit and make sure that it suits them before buying. The customer will also find a large range of peripherals and accessories for a wide range of uses.

With the group's buying power, Dixons and Currys are able to guarantee unbeatable prices and offer the assurance of our satisfaction and quality guarantees.

Most printers, computers and fax machines carry a 12-month at-home warranty. Same-day service is available on most models, making the high street the best place to buy your new Atari ST.

DON'T FORGET TO GET ALL THE BEST OPINIONS ON THE ST NEXT MONTH! RESERVE YOUR COPY OF ST REVIEW NOW. OUT DECEMBER 14TH.

More Atari News & Views from HiSoft

The Serious Page

Devpac 3 £79.95

HiSoft Devpac 3 is the latest version of the popular assembler/ debugger package for *all* Atari 680x0 computers. Packed full of features, it is the ideal programming environment for beginners and professional programmers alike.

Improved and extended, the Devpac 3 macro assembler is now often 40% faster than its predecessor (without using pre-assembly), has many extra, switchable optimisations and, with the ability to pre-assemble files for inclusion, can now claim to be the fastest assembler on the Atari computers. It produces 68000 up to 68030 code (via a user option) & supports the maths co-processors.

Devpac 3 is supplied with a professional 350-page, wire-bound manual, all the necessary include files for your system (ST/STe/TT/Falcon030), GST and Lattice linkers, various utilities, example programs and a complete 68000 Pocket Programmer's Reference Guide. Call or write for more details.

Wordflair 2 £129

We are delighted to announce, at last, the immediate availability of the English variant of Wordflair 2, version 1.1. The main features of this exciting, and long-awaited, package are:

- Full support for FSM GDOS which is included with the product
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Wordflair 2 is now in stock.

The package requires at least 1Mb memory or 4Mb if used with an Atari Laser printer.

The HiSoft Promise

While many other companies are abandoning the Atari market, we are moving forward, acquiring and writing new titles, many of which are detailed on this page.

Rest assured that we will continue to offer you the best software at truly competitive prices with a range of customer support options to ensure that you can use your Atari 680x0 computer, and our software!, with confidence and ease.

We are very encouraged by the Falcon030, believing that it will breathe new life into the general-purpose microcomputer market, which has often been driven by the computer enthusiast, who will find this new machine both fascinating and exciting.

We will sticker all Falcon030 product with Atari-approved labels for convenience and clarity; there are three such labels - *Falcon030 Exclusive*, *Enhanced* and *Compatible*, watch out for them.

TruePaint £39.95

Due for release in November 1992, TruePaint is the first art package to take advantage of the true colour capabilities of the Falcon030 computer. Some of the highlights of the product are:

- Works in all resolutions including 768x480 True Colour
- Easy-to-use multi-window environment with menus, toolbox and keyboard shortcuts Full range of drawing tools
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- Zoom, full screen mode with edit, colour picker, bezier curves
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Watch out for more details of this exciting new package, or call us and we will send you a brochure when this is available.

HiSoft BASIC 2, Harlekin 2, Lattice C 5.5, HiSoft C, HighSpeed Pascal, FTL Modula-2, KnifeST, WERCS, HiSoft Devpac, Wordflair, Diamond Back, Superbase, Diamond Edge, K-Spread, K-Data, K-Word, FirST BASIC, HiSoft FORTH, ProFlight, Tempus 2 ...

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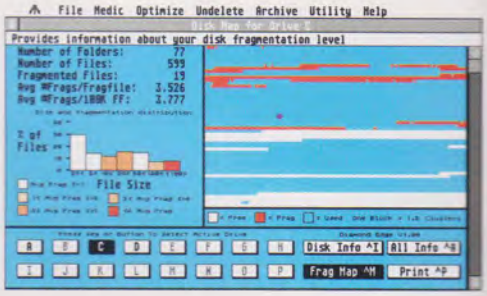

From the authors of Diamond Back, the popular hard disk backup program, comes a new package that is essential to any serious user of an Atari 680x0 computer.

Diamond Edge is a complete set of management, optimisation, diagnostic, repair and data recovery tools for use with floppy disks and hard disks.

XBoot 3 £34.95

We are pleased to have acquired the exclusive rights to version 3 of this package, which provides comprehensive management of your AUTO folders.

XBOOT is an efficient, easy-to-use program and comes with a well-written and useful manual.

Kuma Products

We have taken on the majority of Kuma Computers Ltd's products for the Atari and Amiga computers, while Kuma concentrate on their book titles.

We are re-compiling K-Spread 4 under Lattice C 5.5 and hope to end up with a faster, more compact product, which we will correct and enhance.

Superbase Professional £99.95

Following the sale of the ST and Amiga versions of Superbase to Oxxi Inc with whom we are working closely on a project for the Falcon030, we are pleased to be able to offer Superbase Professional (Version 3) at a substantial saving over its previous recommended price.

All HiSoft's products should be available through your local computer dealer. If you have difficulty in obtaining a title you can order directly from HiSoft using your credit or debit card - just call Julia, Sallie or Marlynne on 0525 718181.

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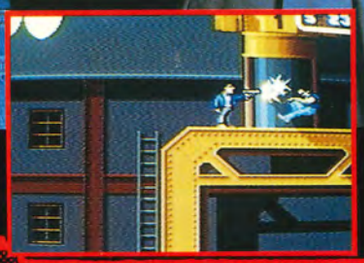

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